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CIA HISTORICAL REVIEW PROGRAM
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MEMORANDUM FOR: Deputy Assistant Director, National Estimates

SUBJECT: Military-Economic Research Area Contribution

Attached are the ORR Contributions

Chief, Military-Economic Research Area

Enclosures (10)
1. Section IA1a - Soviet Operational ICBM Forces
2. Section IA1c - Soviet MRBM and IRBM Forces
3. Section IB1 - Soviet Operational Ballistic and Cruise Missile Submarine Forces
4. Section IC - Soviet Operational Strategic Bomber Forces
5. Section IIC - Soviet Interceptor Aircraft
6. Section IID - Soviet Surface-to-Air Missiles
7. Section IIF - Soviet Anti-Missile Defenses
8. Section IIIA2 - Soviet Tactical Missile Forces
9. Section IIIB - Soviet General Purpose Aviation
10. Section IIIC - Soviet General Purpose Naval Forces

Section IAla Soviet Operational ICBM Forces

We estimate that the deployment of the SS-7 in a soft mode will be completed by mid-1964 and in a hard mode by mid-1965. This estimate is based on recent KEYHOLE photography which reveals that there have been no new soft SS-7 construction "starts" at 12 of the 18 ICBM complexes since September 1963, and which fails to reveal the initiation of construction of hard SS-7 sites since about August 1963.

The Soviets have recently fired a type of ICBM from the Tyuratam Test Range with sufficiently distinct characteristics so as to be classified as a modified SS-7, designated in Table IAla as the SS-7A. These "SS-7A's" may have been fired from Area H (possibly a semi-hardened, two-launcher facility) and area D-2 (a hardened, three-silo facility); each of these areas has associated electronics/guidance facilities not present at areas C or D-1 from which the "standard" SS-7 has been launched.

The program presented in Table IAla assumes that the SS-7A will be deployed in both semi-hard and hard configurations in the mid-1965 to mid-1967 time period, and that this system will be used to fill out existing SS-7 complexes. The possibility that the SS-7A will be deployed at existing SS-7 soft sites is not reflected in Table IAla.

The SS-8 program, both hard and soft, remains essentially as reported in NIE 11-8-63. This program definitely was curtailed in 1962 and there has not been any indication of new construction activity for this system. We estimate that the soft SS-8 deployment program will be completed by mid-1964 and the hard program by mid-1965.

At the time of preparation of NIE 11-8-63 it was believed that area G1/2 at Tyura Tam might be the prototype for a very large missile capable of delivering warheads in the 50-100 MT range. Recent determination of the launch pad separation distance suggests that the missile to be fired from G1/2 may be a follow-on ICBM, SS-9, somewhat larger in size and payload capability than the SS-7 and SS-8, but not in the 50-100 MT warhead class. The SS-9 could be used to fill out existing SS-8 complexes in the 1966-67 period.

Construction at area G3/4 has not reached a stage where it is possible to ascertain the function of this area. If it is a hard configuration, it may represent the hardened version of the missile to be tested at G1/2. If soft, the pad separation suggests a large vehicle which might be employed for space or military missions. This large vehicle may be the SS-VL (capable of delivering warheads in the 50-100 MT class) which we estimated in NIE 11-8-63 would be deployed by mid-1966, but which we now estimate will be deployed by mid-1967. If G3/4 is not suitable for the development of the SS-VL, Launch Area A, B or the possible launch area under construction between areas A and E might be used for this purpose.

There is no indication at Tyuratam of a prototype for a small ICBM (SS-Small). If such a system is developed we believe that initial deployment would occur in the mid-67 to mid-68 period rather than in the mid-65 to mid-66 period estimated in NIE 11-8-63.

SOVIET OPERATIONAL ICBM FORCES -- TOTAL STRENGTHS BY SYSTEM BY YEAR (OB)

TOTAL NUMBERS OF UNITS AND WEAPONS	Mid-1961 (Lo/Hi)	Mid-1962 (Lo/Hi)	Mid-1963 (Lo/Hi)	Mid-1964 (Lo/Hi)	Mid-1965 (Lo/Hi)	Mid-1966 (Lo/Hi)	Mid-1967 (Lo/Hi)	Mid-1968 (Lo/Hi)	Mid-1969 (Lo/Hi)	Mid-1970 (Lo/Hi)
ICBM Complexes 1/	1	8	12	18	18	18	18-21	18-25	18-35	18-35
ICBM Systems at Complexes										
SS-6 Bns (soft) 2/										
Sites	3	3	3	3	3	3	0	0	0	0
Launchers	4	4	4	4	4	4	0	0	0	0
Missiles 3/	6-8	6-8	6-8	6-8	6-8	6-8	0	0	0	0
SS-7 Bns (soft)										
Sites	0	14	34	65	65	65	65	65	65	65
Launchers	0	28	68	130	130	130	130	130	130	130
Missiles 3/	0	42-56	102-136	195-260	195-260	195-260	195-260	195-260	195-260	195-260
SS-7 Bns (hard) 7/ 5/										
Sites		0	5	12	26	26	26	26	26	26
Launchers (silos)		0	15	36	78	78	78	78	78	78
Missiles 3/		0	15	36	78	78	78	78	78	78
SS-7A Bns (semi-hard) 6/										
Sites				0	0-5	20-25	25-30	25-30	25-30	25-30
Launchers				0	0-10	40-50	50-60	50-60	50-60	50-60
Missiles 3/				0	0-10	40-50	50-60	50-60	50-60	50-60
SS-7A Bns (hard) 6/										
Sites					0	4-8	20-25	20-25	20-25	20-25
Launchers					0	12-24	60-75	60-75	60-75	60-75
Missiles					0	12-24	60-75	60-75	60-75	60-75

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IA 1a (cont'd)

TOTAL NUMBERS OF UNITS AND WEAPONS	Mid-1961 (Lo/Hi)	Mid-1962 (Lo/Hi)	Mid-1963 (Lo/Hi)	Mid-1964 (Lo/Hi)	Mid-1965 (Lo/Hi)	Mid-1966 (Lo/Hi)	Mid-1967 (Lo/Hi)	Mid-1968 (Lo/Hi)	Mid-1969 (Lo/Hi)	Mid-1970 (Lo/Hi)
SS-8 Bns (soft)										
Sites	0	1	7	7	7	7	7	7	7	7
Launchers	0	2	14	14	14	14	14	14	14	14
Missiles 3/	0	3-4	21-28	21-28	21-28	21-28	21-28	21-28	21-28	21-28
SS-8 Bns (hard) 5/										
Sites		0	1-2	3-4	3-4	3-4	3-4	3-4	3-4	3-4
Launchers (silos)		0	3-6	9-12	9-12	9-12	9-12	9-12	9-12	9-12
Missiles 3/		0	3-6	9-12	9-12	9-12	9-12	9-12	9-12	9-12
SS-9 Bns (soft & hard) 7/										
Sites				0	0-15	0-40	0-50	0-50	0-50	0-50
Launchers				0	0-30	0-80	0-100	0-100	0-100	0-100
Missiles				0	0-30	0-80	0-100	0-100	0-100	0-100
SS-VL Bns (soft) 8/										
Sites					0	9-12	12-15	12-15	12-15	12-15
Launchers					0	18-24	24-30	24-30	24-30	24-30
Missiles					0	18-24	24-30	24-30	24-30	24-30
SS-Small Bns (hard) 9/										
Sites							0	0-35	0-90	0-100
Launchers (silos)							0	0-35	0-90	0-100
Missiles 3/							0	0-35	0-90	0-100

TOTAL NUMBERS OF UNITS AND WEAPONS	Mid-1961 (Lo/Hi)	Mid-1962 (Lo/Hi)	Mid-1963 (Lo/Hi)	Mid-1964 (Lo/Hi)	Mid-1965 (Lo/Hi)	Mid-1966 (Lo/Hi)	Mid-1967 (Lo/Hi)	Mid-1968 (Lo/Hi)	Mid-1969 (Lo/Hi)	Mid-1970 (Lo/Hi)
Subtotals										
Soft Sites	3	17	38	75	75	75-82	81-104	84-112	84-112	84-112
Soft Launchers	4	32	74	148	148	148-163	162-208	168-224	168-224	168-224
Hard Sites	0	0	5	13-14	29-35	53-71	74-105	74-145	74-200	74-210
Hard Launchers (silos)	0	0	15	39-42	87-100	139-179	197-265	197-310	197-365	197-375
Total Sites	3	17	43	88-89	104-110	128-153	155-209	158-257	158-312	158-322
Total Launchers	4	32	89	187-190	235-248	287-342	359-473	365-534	365-589	365-599
Test Range										
Sites	4	4	7	10	11	11-12	11-13	11-14	11-15	11-15
Soft Launchers	5	6	9	13	15	17	15-17	15-19	15-20	15-20
Hard Launchers (silos)	0	0	6	9	9	9	9-11	9-11	9-11	9-11
GRAND TOTAL LAUNCHERS	9	38	104	209-212	259-272	313-368	383-501	389-564	389-620	389-630
GRAND TOTAL LAUNCHERS (ROUNDED)	10	40	105	210	250-280	310-370	380-510	380-570	380-620	380-630

IA 1a (cont'd)

Footnotes:

1/ A complex was considered operational when at least one launch area was operational.

2/ Replaced by SS-VL by mid-1967.

3/ These figures reflect on-site missiles only and are alloted at 1.5 - 2 per soft launcher and 1 per hard launcher.

4/ The last 14 hard site starts are considered candidates for the normal SS-7.

5/ Assumes 3 silos per hard site.

6/ Improved SS-7; see NIE 11-8-63. Prototype Area H and Area D2 TTMTR. Assume 2 launchers per semi-hard, 3 per hard.

7/ SS-9 may be hard & soft or soft only. This table assumes an equal division between hard and soft. Prototype Area G TTMTR.

8/ Very large ICBM; see NIE 11-8-63. Possible prototype Area G-3-4 TTMTR.

9/ Somewhat smaller ICBM; see NIE 11-8-63. May be solid; no TTMTR prototype.

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IA 1b

SOVIET ICBM INVENTORY BY YEAR

A. On-Launcher
B. Refire
C. Maintenance and pipeline

TYPE	Mid-1961			Mid-1962			Mid-1963			Mid-1964			Mid-1965		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
SS-6 (soft)	4	2-4	2	4	2-4	2	4	2-4	2	4	2-4	2	4	2-4	2
SS-9 (hard & soft)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SS-7 (soft)	0	0	0	28	14-28	8-10	68	34-68	20-25	130	45-130	20-30	130	65-130	20-30
SS-7 (hard)	0	0	0	0	0	0	15	0	2-3	36	0	5-6	78	0	10-15
SS-7A (hard & semi hard)	0	0	0	0	0	0	0	0	0	0	0	0	0-10	0	0-2
SS-8 (soft)	0	0	0	0	0	0	2	1-2	5	14	7-14	3-4	14	7-14	3-4
SS-8 (hard)	0	0	0	0	0	0	0	0	0	3-6	0	1	9-12	0	2
SS-VL (soft)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SS-Small (hard)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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IA 1b (cont'd)

SOVIET ICBM INVENTORY BY YEAR

A. On-Launcher
B. Refire
C. Maintenance and pipeline

TYPE	Mid-1966			Mid-1967			Mid-1968			Mid-1969			Mid-1970		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
SS-6 (soft)	4	2-4	2	0	0	0	0	0	0	0	0	0	0	0	0
SS-9 (hard & soft)	0-30	00	0-5	0-80	0	0-15	0-100	0	0-15	0-100	0	0-15	0-100	0	0-15
SS-7 (soft)	130	65-130	20-30	130	65-130	20-30	130	65-130	20-30	130	65-130	20-30	130	65-130	20-30
SS-7 (hard)	78	0	10-15	78	0	10-15	78	0	10-15	78	0	10-15	78	0	10-15
SS-7A (hard & semi-hard)	50-75	0	10	110-135	0	15-20	110-135	0	15-20	110-135	0	15-20	110-135	0	15-20
SS-8 (soft)	14	7-14	3-4	14	7-14	3-4	14	7-14	3-4	14	7-14	3-4	14	7-14	3-4
SS-8 (hard)	9-12	0	2	9-12	0	2	9-12	0	2	9-12	0	2	9-12	0	2
SS-VL (soft)	0	0	0	18-24	0	3-4	24-30	0	4-5	24-30	0	4-5	24-30	0	4-5
SS-Small (hard)	0	0	0	0	0	0	0-35	0	6-7	0-90	0	15-20	0-100	0	15-20

Section IA 1C

Soviet Operational MREM and IREM Forces

The figures in the table on page 18 of NIE 11-8-63 are essentially unchanged in the attached Table I A 1 c. A recent decision to estimate four launch silos instead of two at each of the MREM hardened sites, and three silos instead of two at the IREM hardened sites results in an upward revision in the total numbers of MREM and IREM hard launchers.

Delay in the construction schedule of some of the IREM and MREM hard sites has caused us to change our estimate of the date for peak operational capability from mid-63 to mid-65 for the MREM hardened sites, and from mid-64 to mid-65 for the IREM hardened sites.

The possible follow-on MREM/IREM system discussed in NIE 11-8-63 is not programmed separately in Table I A 1 c because it is assumed that this system will be deployed at existing SS-4 and SS-5 sites in the latter half of the decade. The total number of launchers will therefore be unchanged, although the composition of the force will vary as the new system is deployed.

IA.1c

SOVIET OPERATIONAL MRBM AND IREM FORCES --
TOTAL STRENGTHS AND DEPLOYMENT BY SYSTEM BY YEAR (OB) 1/

TOTAL NUMBERS OF UNITS AND WEAPONS	Mid-1961			Mid-1962			Mid-1963			Mid-1964			Mid-1965 to Mid-1970 11/		
	W	S	E	W	S	E	W	S	E	W	S	E	W	S	E
MREM/IREM Corps/Armies 2/	2	0-1	0-1	2	1	0-1	2	1-2	1	2	2	1	2	2	1
MREM/IREM Divisions 3/	15-26	1	1	16-29	1-2	1-3	19-30	2-3	2-3	21-30	2-3	2-3	21-30	3	2-3
MREM/IREM Regiments 4/	45-53	2-3	3	48-58	3-5	3-6	56-61	6	5-6	61	6	5-6	61	7	5-6
SS-3 Bn (soft) 5/	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prime Launch Sites	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prime Launch Posit.	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alt. Launch Sites	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alt. Launch Posit.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Launchers	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Missiles 6/	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SS-4 Bn (soft)	83	5	6	107	7	8	116	7	9	116	7	9	116	7	9
Prime Launch Sites	83	5	6	107	7	8	116	7	9	116	7	9	116	7	9
Prime Launch Posit.	332	20	24	428	28	32	464	28	36	464	28	36	464	28	36
Alt. Launch Sites 7/	0-1	0	0	0-10	0-1	0	0-12	0-1	0-3	0-13	0-1	0-3	0-13	0-1	0-3
Alt. Launch Posit.	2	0	0	21-23	3	0	31-33	4	12	35-37	4	12	35-37	4	12
Launchers	332	20	24	428	28	32	464	28	36	464	28	36	464	28	36
Missiles 6/	498-664	30-40	36-48	642-856	42-56	48-64	696-928	42-56	54-72	696-928	42-56	54-72	696-928	42-56	54-72
SS-5 Bn (hard)	0	0	0	0	0	0	16	2	0	16	3	0	18	3	0
Silos	0	0	0	0	0	0	16	2	0	16	3	0	18	3	0
Launchers (silos) 8/	0	0	0	0	0	0	64	8	0	64	12	0	72	12	0
Missiles 9/	0	0	0	0	0	0	64	8	0	64	12	0	72	12	0

TOTAL NUMBERS OF UNITS AND WEAPONS	Mid-1961			Mid-1962			Mid-1963			Mid-1964			Mid-1965 to Mid-1970 11/		
	W	S	E	W	S	E	W	S	E	W	S	E	W	S	E
SS-5 Bn (soft)	0	0	0	5	1	1	10	1	1	10	1	1	10	1	1
Sites (prime)	0	0	0	5	1	1	10	1	1	10	1	1	10	1	1
Launchers	0	0	0	20	4	4	40	4	4	40	4	4	40	4	4
Missiles 6/	0	0	0	30-40	6-8	6-8	60-80	6-8	6-8	60-80	6-8	6-8	60-80	6-8	6-8
Alt. Launch Sites 7/	0	0	0	0	0	0	0-1	0-2	0	0-1	0-2	0	0-1	0-2	0
Alt. Launch Posit.	0	0	0	0	0	0	4	8	0	4	8	0	4	8	0
SS-5 Bn (hard) 9/	0	0	0	0	0	0	4	2	0	9	5	0	11	7	2
Sites	0	0	0	0	0	0	4	2	0	9	5	0	11	7	2
Launchers (silos) 8/	0	0	0	0	0	0	12	6	0	27	15	0	33	21	6
Missiles 6/	0	0	0	0	0	0	12	6	0	27	15	0	33	21	6
Subtotals															
Prime Launch Sites (s)	90	5	6	112	8	9	126	8	10	126	8	10	126	8	10
Prime Launch Posit. (s)	360	20	24	448	32	36	504	32	40	504	32	40	504	32	40
Hard Sites	0	0	0	0	0	0	20	4	0	25	8	0	29	10	2
Hard Launch (silos)	0	0	0	0	0	0	76	14	0	91	27	0	105	33	6
Total Sites	90	5	6	112	8	9	146	12	10	151	16	10	155	18	12
Total Prime Launch Positions/Silos	360	20	24	448	32	36	580	46	40	595	59	40	609	65	46
Test Range 10/															
Soft Launch Sites	0	3	0	0	4	0	0	5	0	0	5	0	0	5	0
Soft Launch Posit.	0	5	0	0	8	0	0	12	0	0	12	0	0	12	0
Hard Launch Sites	0	0	0	0	1	0	0	2	0	0	2	0	0	2	0
Hard Launchers (silos)	0	0	0	0	4	0	0	7	0	0	7	0	0	7	0
Grand Total Prime Launch Positions/Silos	360	25	24	448	44	36	580	65	40	595	78	40	609	84	46
Total Launchers - By Year (Rounded) 12/		410			530			685			715			740	

Footnotes.

1/ Three general geographic groupings of Soviet MR/IRBM's exist: Western, Southern and Far Eastern. They are noted in this table as W, S, and E respectively.

2/ These figures include both army and independent corp figures. (2 armys in the west, the rest independent corps).

3/ These figures assume a minimum of 2 and a maximum of three regiments per division.

4/ A regiment (complex) was considered operational when at least 2 sites in the complex were operational. The range reflects the possibility of the regiment being operational with only 1 site completed and the possibility of a one-site complex (Anadyr ?) being an independent regiment.

5/ All SS-3 sites assumed replaced by mid-62 with SS-4.

6/ Assuming 1.5-2 missiles per soft launcher and 1 missile per hard launcher.

7/ Eight unique single sites without support areas, and the 12 fixed field type sites are considered possible alternate sites or possible replacement sites for these sites. They are not reflected in any other figure.

8/ Assuming 4 silos per MRBM hard site and 3 silos per IRBM site.

9/ A new follow-on mobile could become operational in the 1965-67 time period and probably would replace the SS-4 and/or SS-5 at existing sites, both hard and soft. There is a possibility that it could be deployed as a mobile system.

10/ This figure reflect XX soft areas 1C, 2C, 3C, 5C, 6 and hard area 4C.

11/ No significant increase in numbers is anticipated for the mid-65 to mid-70 time period. Any new weapons systems will replace existing systems on existing sites.

12/ As all figures in the chart represent known launchers, the total launcher figures were rounded up to the nearest multiple of five in all cases.

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IA-1d

SOVIET MREM/IRBM MISSILE INVENTORY BY YEAR

A. On-Launcher
B. Refire
C. Maintenance, pipeline, training, reserve

TYPE	Mid-1961			Mid-1962			Mid-1963			Mid-1964			Mid-1965 to Mid-1970		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
SS-3 (soft)	28	28	10	0	0	0	0	0	0	0	0	0	0	0	0
SS-4 (soft)	376	282-376	75-175	488	366-488	100-200	528	400-528	100-200	528	400-528	100-200	528	400-528	100-200
SS-4 (hard)	0	0	0	0	0	0	12	0	10	76	0	10	81	0	10-15
SS-5 (Soft)	0	0	0	28	28	35-40	118	118	15-20	118	118	15-20	118	118	15-20
SS-5 (hard)	0	0	0	0	0	0	18	0	15	72	0	10	60	30	15
Total, All Types	404	310-404	85-185	516	394-516	135-240	666	448-576	130-235	694	448-576	240	720	448-576	140-250
Total, All Types (Rounded)	400	310-410	80-190	520	400-520	130-240	670	440-580	130-240	690	440-580	130-240	720	440-580	140-250

IA 2a

SOVIET OPERATIONAL ICBM MRBM IRBM FORCES - PERSONNEL AND MISSILES PER UNIT

	Operational Personnel	Support Personnel	Total Personnel	On-Launchers/Missiles	Maintenance, Refire, Spares	Pipeling & Training	Total Missiles
ICBM Units							
SS-6 Bn (soft)	400	0	400	4			4
SS-7 Bn (soft)	400	0	400	2			2
SS-7 Bn (hard)	300	0	300	3			3
SS-7A Bn (hard)	300	0	300	3			3
SS-8 Bn (soft)	400	0	400	2			2
SS-8 Bn (hard)	300	0	300	3			3
SS-VL Bn (soft)	400	0	400	2			2
SS-Small Bn (hard)	100-150	0	100-150	1			1
SS-7A Bn (semi-hard)	300	0	300	2			2
ICBM Complex (not counted above)	0	1500-2000	1500-2000	3-25			3-25
MRBM/IRBM Units							
SS-3 Bn. (soft)	350	0	350	4			4
SS-4 Bn. (soft)	425	0	350	4			4
SS-4 Bn. (hard)	300	0	300	4			4
SS-5 Bn. (soft)	425	0	425	4			4
SS-5 Bn. (hard)	300	0	300	3			3
SS-Follow-on Bn. (hard)	300	0	300	3			3
MRBM/IRBM Regiment (not counted above)	0	300-350	300-350	6-12			6-12
MRBM/IRBM Division (not counted above)	0	350-450	350-450	12-36			12-36

Section I B1

Soviet Operational Ballistic and
Cruise Missile Submarine Forces

In NIE 11-8-63 it was estimated that either construction of the G and H class ballistic missile submarines would continue or that a follow-on submarine would be constructed to fire the SS-N-5 missile. We believe that construction of G and H class submarines has probably ceased. There is no evidence to indicate that a follow-on program for either the G or H classes is currently underway; we therefore believe that the Soviets will retrofit all G and H class submarines with the SS-N-5 system. We assume that a follow-on ballistic missile submarine will be operational in 1968; it probably would be nuclear-powered and equipped with solid-fueled missiles.

SOVIET OPERATIONAL BALLISTIC AND CRUISE MISSILE SUBMARINE FORCES --
STRENGTH AND DEPLOYMENT BY MODEL BY YEAR 1/

	Mid-1961		Mid-1962		Mid-1963		Mid-1964		Mid-1965		Mid-1966		Mid-1967		Mid-1968		Mid-1969		Mid-1970	
	NF	PF	NF	PF	NF	PF	NF	PF	NF	PF	NF	PF	NF	PF	NF	PF	NF	PF	NF	PF
GM Submarine Brigades	3	1	3	2	3	2	3	3	4	3	4	3	4	3	5	3	5	3	5	3
GM Subs-Ballistic 3/	18-22	6	27-31	9	33-38	10	34-39	10	34-39	10	34-39	10	34-39	10	35-40	10	38-43	10	41-46	10
Z Conv. (diesel)	4	2	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3	4	3
G (diesel)	10-12	4	18-20	6	21-24	7	21-24	7	21-24	7	21-24	7	21-24	7	21-24	7	21-24	7	21-24	7
SS-N-4 equipped	14-16	6	21-23	9	24-27	10	24-27	10	23-25	8	21-22	6	19	4	13-12	3	7-4	3	4	3
SS-N-5 equipped	0	0	1	0	1	0	1	0	2-3	2	4-6	4	6-9	6	12-16	7	18-24	7	21-24	7
TOTAL Diesel	14-16	6	22-24	9	25-28	10	25-28	10	25-28	10	25-28	10	25-28	10	25-28	10	25-28	10	25-28	10
H (nuclear)	4-6		5-7		8-10		9-11		9-11		9-11		9-11		9-11		9-11		9-11	
SS-N-4 equipped	4-6		5-7		8-10		8-9		5-6		2-3									
SS-N-5 equipped							1-2		4-5		7-8		9-11		9-11		9-11		9-11	
SS-N Follow-on															2/		4/		7/	
TOTAL Nuclear	4-6		5-7		8-10		9-11		9-11		9-11		9-11		10-12		13-15		16-18	
GM Subs-Cruise 2/ 3/	3	2	8	5	6	9	9-10	11	12-15	13-15	16-20	15-18	20-26	17-21	20-26	19-24	20-26	21-27	20-26	23-30
W Conv. (diesel)	3		8	1	6	3	8	3	8	3	8	3	8	3	8	3	8	3	8	3
J (diesel)							1-2		4-7		8-12		12-18		12-18		12-18		12-18	
TOTAL Diesel	3		8	1	6	3	9-10	3	12-15	3	16-20	3	20-26	3	20-26	3	20-26	3	20-26	3
E Mod. 1 (nuclear)		2		4		5		6		6-7		6-7		6-7		6-7		6-7		6-7
E Mod. 2 (nuclear)						1		2		4-5		6-8		8-11		10-14		12-17		14-20
TOTAL Nuclear		2		4		6		8		10-12		12-15		14-18		16-21		18-24	20-	20-27

Table 1B 1a
"Soviet Operational Ballistic and Cruise Missile Submarine Forces -- Strength and Deployment by Model by Year" (Continued)

Footnotes

1. There are submarine forces with all the Soviet fleets: Northern, Baltic, Black Sea, and Pacific. Except for one W-Conversion (Twin Cyliner assigned to Black Sea Fleet), however, all Soviet missile submarines are assigned to the Northern and Pacific Fleets; these are abbreviated NF and PF, respectively, in this table.

2. The primary role of the Soviet cruise missile submarines is anti-shipping. However, they can be used for attack against land targets. These same submarines are listed also under Section III, Soviet General Purposes (Naval) and are manned and costed in that section.

3. If the Soviets establish a routine pattern of continuous patrolling of the coast of the continental US, a maximum of about 20% of the nuclear-power and 20% of the diesel-power missile submarines in the Pacific Fleet and about 20% of the nuclear-power and 20% of the diesel-power missile submarines in the Northern Fleet could be maintained on patrol stations for 20 days within missile-launching range of CONUS targets. The submarines available for such patrols do not include W-Class submarines which are limited in range to operations in the western Pacific and eastern Atlantic, respectively. See operational factors summarized in Table 1B 3a.

SOVIET NAVAL BALLISTIC MISSILE INVENTORY BY YEAR 1/
A. ABOARD SHIP 2/
B. RESERVE 3/

Type	Mid-1961 A	Mid-1961 B	Mid-1962 A	Mid-1962 B	Mid-1963 A	Mid-1963 B	Mid-1964 A	Mid-1964 B	Mid-1965 A	Mid-1965 B	Mid-1966 A	Mid-1966 B	Mid-1967 A	Mid-1967 B	Mid-1968 A	Mid-1968 B	Mid-1969 A	Mid-1969 B	Mid-1970 A	Mid-1970 B
SS-N-4	65-77	20	97-109	27	118-133	33	118-130	33	100-109	27	79-85	21	61	15	40-37	10	22-13	6	13	3
SS-N-5					2	1	5-8	2	23-29	7	44-53	13	62-77	19	83-101	25	101-125	31	110-125	31
/SS-N Follow-on/															/8-16/	/4/	/32-64/	/16/	/56-112/	/28/

/ For [illegible] series see Table III D 1c.

[illegible] such alternative [illegible] shown in Table IB 1c.

[illegible] range.

Section 1 C Soviet Operational Strategic Bomber Forces

SOVIET OPERATIONAL STRATEGIC BOMBER FORCES 1/*
STRENGTHS BY TYPE BY YEAR

	Mid-1961 Lo/Hi	Mid-1964 Lo/Hi	Mid-1967 Lo/Hi	Mid-1970 Lo/Hi
Long Range Air Armies				
LRA Divisions 2/	15	15	11- 13	10- 13
Heavy Bomber Regmts				
Bear Regiments	4	5	5	4- 5
AS-3 carrier	45- 50	52- 60	45- 55	35- 45
Bomb carrier	30- 35	33- 40	30- 40	30- 40
(Probe-equipped)	0	(12- 18)	(12- 18)	(12- 18)
Total BEAR's	[75- 85]	85- 100	75- 95	65- 85
BISON Regiments	6	6	4- 6	4- 6
Bombers	70- 75	65- 75	55- 65	45- 55
Tankers	25- 30	20- 30	20- 30	20- 30
Total BISON's	95- 105	[85] 105	[75] 95	65- 85
Total HB Regmts	10	11	9- 11	8- 11
Total Heavy Bombers	[170- 190]	[170] 205	150- 190	130- 170
Medium Bomber Regiments 3/				
BADGER Regiments 4/	32- 33	28- 31	9- 22	7- 22
Bombers	850- 900	650- 750	100- 450	50- 450
Tankers	100- 150	100- 150	125- 150	125- 150
Total BADGER's	950-1,050	750- 900	250- 600	200- 600

* Footnotes follow on next page.

SOVIET OPERATIONAL STRATEGIC BOMBER FORCES
STRENGTHS BY TYPE BY YEAR
(Continued)

	Mid-1961 Lo/Hi	Mid-1964 Lo/Hi	Mid-1967 Lo/Hi	Mid-1970 Lo/Hi
BLINDER Regiments 4/	0	2- 4	4- 10	4- 10
AS-4 carrier	0	0- 50	50- 150	50- 150
Bomb carrier	0	50- 100	50- 125	50- 125
(Probe-equipped)	0	(0- 50)	(50- 150)	(50- 150)
Total BLINDER's	0	50- 100	100- 275	100- 275
Total MB Regiments	32- 33	32- 33	20- 26	18- 26
Total Medium Bombers	950-1,050	850- 950	525- 700	475- 700

1/ LRA Bears have engaged in over-water reconnaissance missions in support of the Soviet Navy. These missions have been performed only on specific request by the Soviet Navy, and have constituted only a small percentage of overall heavy bomber operations. The weapons delivery capability of the aircraft involved is not affected.

2/ The number shown represents the number of heavy bomber divisions (4) plus one division for every three medium bomber regiments.

3/ The figures given in this section do not necessarily add up to the totals shown. This is a result of the various possible Blinder/Badger force structures.

4/ The number shown represents one regiment for each medium bomber regiment, plus one regiment for every three medium bomber "units," plus one regiment for every two training regiments (of which there are four, all in the NW).

SOVIET OPERATIONAL STRATEGIC BOMBER FORCES DEPLOYMENT BY TYPE BY YEAR 1/ 2/*

Long Range Air Armies	Mid-1964 NW Lo/Hi	Mid-1964 SW Lo/Hi	Mid-1964 FE Lo/Hi	Mid-1964 Total Lo/Hi	Mid-1967 NW Lo/Hi	Mid-1967 SW Lo/Hi	Mid-1967 FE Lo/Hi	Mid-1967 Total Lo/Hi	Mid-1970 NW Lo/Hi	Mid-1970 SW Lo/Hi	Mid-1970 FE Lo/Hi	Mid-1970 Total Lo/Hi
LRA Divisions 3/	6	5	4	15	4- 5	3- 4	4	11- 13	4- 5	3- 4	3- 4	10- 13
Heavy Bomber Regiments												
BEAR Regiments	0	3	2	5	0	3	2	5	0	2- 3	2	4- 5
AS-3 carrier	0	35- 40	17- 20	52- 60	0	30- 35	15- 20	45- 55	0	20- 25	15- 20	35- 45
Bomb carrier	0	15- 20	18- 20	33- 40	0	15- 20	15- 20	30- 40	0	15- 20	15- 20	30- 40
(Probe-equipped)	0	(6- 9)	(6- 9)	(12- 18)	0	(6- 9)	(6- 9)	(12- 18)	0	(6- 9)	(6- 9)	(12- 18)
Total BEAR's	0	50- 60	35- 40	85-100	0	45- 55	30- 40	75- 95	0	35- 45	30- 40	65- 85
BISON Regiments	3	0	3	6	2- 3	0	2- 3	4- 6	2- 3	0	2- 3	4- 6
Bombers	35- 40	0	30- 35	65- 75	30- 35	0	25- 30	55- 65	25- 30	0	20- 25	45- 55
Tankers	10- 15	0	10- 15	20- 30	10- 15	0	10- 15	20- 30	10- 15	0	10- 15	20- 30
Total BISON's	45- 55	0	40- 50	/85-105	40- 50	0	35- 45	/75- 95	35- 45	0	30- 40	65- 85
Total HB Regiments	3	3	5	11	2- 3	3	4- 5	9- 11	2- 3	2- 3	4- 5	8- 11
Total Heavy Bombers	45- 55	50- 60	75- 90	/170-205	40- 50	45- 55	65- 85	150-190	35- 45	35- 45	60- 80	130-170
Medium Bomber Regiments 4/												
BADGER Regiments 5/	10- 12	11- 12	6- 7	28- 31	4- 9	3- 8	2- 5	9- 22	3- 9	2- 8	2- 5	7- 22
Bombers	275-300	225-275	150-175	650-750	40-190	35-160	25-100	100-450	20-190	15-160	15-100	50-450
Tankers	40- 60	40- 60	20- 30	100-150	50- 60	45- 55	30- 35	125-150	50- 60	45- 55	30- 35	125-150
Total BADGER's	315-360	265-335	170-205	750-900	105-250	85-210	60-140	250-600	70-250	60-210	45-140	200-600

* See footnotes on following page.

Long Range Air Armies	Mid-1964 NW Lo/Hi	Mid-1964 SW Lo/Hi	Mid-1964 FE Lo/Hi	Mid-1964 TOTAL Lo/Hi	Mid-1967 NW Lo/Hi	Mid-1967 SW Lo/Hi	Mid-1967 FE Lo/Hi	Mid-1967 TOTAL Lo/Hi	Mid-1970 NW Lo/Hi	Mid-1970 SW Lo/Hi	Mid-1970 FE Lo/Hi	Mid-1970 TOTAL Lo/Hi
BLINDER Regiments 5/	2- 4	0- 1	0- 1	2- 4	2- 5	1- 3	1- 3	4- 10	2- 5	1- 3	1- 3	4- 10
AS-4 carrier	0- 50	0	0	0- 50	0- 50	25- 50	25- 50	50-150	0- 50	25- 50	25- 50	50-150
Bomb carrier	50-100	0- 25	0- 25	50-100	50- 75	0- 25	0- 25	50-125	50- 75	0- 25	0- 25	50-125
(Probe-equipped)	(0- 50)	0	0	(0- 50)	(0- 50)	(25- 50)	(25- 50)	(50-150)	(0- 50)	(25- 50)	(25- 50)	(50-150)
Total BLINDER's	50-100	0- 25	0- 25	50-100	50-125	25- 75	25- 75	100-275	50-100	25- 75	25- 75	100-275
Total MB Regiments	13- 14	12	7	32- 33	8- 11	7- 9	5- 6	20- 26	8- 11	6- 9	4- 6	18- 26
Total Medium Bombers	400-425	290-335	195-205	850-950	220-290	185-250	120-160	525-700	200-290	165-250	110-160	475-700

1/ LRA Bears have engaged in over-water reconnaissance missions in support of the Soviet Navy. These missions have been performed only on specific request by the Soviet Navy, and have constituted only a small percentage of overall heavy bomber operations. The weapons delivery capability of the aircraft involved is not affected.

2/ The three LRA armies are located one in northwest USSR, one southwest USSR, and the third east of the Urals. They are designated NW, SW, and FE in this table.

3/ The number shown represents the number of heavy bomber divisions (4) plus one division for every three medium bomber regiments.

4/ The figures given in this section do not necessarily add up to the totals shown. This is a result of the various possible Blinder/Badger force structures.

5/ The number shown represents one regiment for each medium bomber regiment, plus one regiment for every three medium bomber "units," plus one regiment for every two training regiments (of which there are four, all in the NW).

IC 2a

SOVIET STRATEGIC BOMBER FORCES
AND EQUIPMENT PER UNIT

Unit	Heavy Bombers	Medium Bombers	Support Aircraft	AS-3 Missiles	AS-4 Missiles
BEAR Regiment	18	9	0	54 1/	0
BISON Regiment	17	9	0	0	0
BADGER Regiment	0	27	0	0	0
BLINDER Regiment	0	27	0	0	110 2/
LRA Division aircraft, and missiles in addition to above)	0	0	4- 5	0	0
LRA Army aircraft, and missiles in addition to above)	0	0	20-30	0	0

1/ Only for the three Bear ASM regiments.

2/ Only for an all-Blinder ASM regiment; it is estimated that about half of theBlinders will be AS-4 carriers.

Section II C Soviet Interceptor Aircraft

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Soviet Interceptor Aircraft - Strengths by Model by Year

Model	Mid-1961 Low - Hi	Mid-1962 Low - Hi	Mid-1963 Low - Hi	Mid-1964 Low - Hi	Mid-1965 Low - Hi	Mid-1966 Low - Hi	Mid-1967 Low - Hi	Mid-1968 Low - Hi	Mid-1969 Low - Hi	Mid-1970 Low - Hi
All Weather										
Newer										
Fishpot B	150- 200	325- 400	450- 550	525- 625	600- 700	600- 700	600- 700	450- 550	300- 500	200- 475
Fishbed D	0	25- 50	125- 175	240- 350	350- 550	450- 700	575- 875	700- 950	600- 950	500- 850
Flipper*	0	0	0	0	0	0	0	0	0	0
Fiddler**	0	0	0	0	10- 40	25- 75	50- 100	75- 150	100- 200	100- 200
Firebar B	0	0	0	0	25- 50	100- 150	200- 275	300- 400	350- 450	300- 450
New PVO Fighter	0	0	0	0	0	0- 25	0- 100	0- 125	0- 200	0- 300
Older										
Fresco D, E	450- 525	425- 500	375- 475	325- 450	225- 350	125- 250	0- 125	0	0	0
Farmer B, E	175- 200	150- 175	125- 150	75- 100	25- 75	0- 50	0	0	0	0
Flashlight A	450- 500	375- 425	300- 375	260- 340	200- 280	100- 200	25- 125	0	0	0
Clear-Air-Mass										
Newer										
Fishbed C	150- 175	250- 275	300- 350	300- 350	300- 350	250- 300	175- 225	50- 150	0	0
Fitter	50- 75	125- 150	275- 300	350- 500	450- 600	525- 725	550- 750	550- 750	500- 700	400- 600
New TAF Fighter †	0	0	0	0	0	0	0- 50	0- 200	0- 400	0- 500
Older										
Fagot	650- 750	500- 600	250- 350	175- 225	75- 125	0	0	0	0	0
Fresco A,B,C	4,600-4,775	4,025-4,200	3,575-3,725	2,925-3,050	2,075-2,450	1,225-1,850	700-1,325	0- 600	0	0
Farmer A,C,D	900- 975	850- 925	825- 900	775- 850	675- 750	475- 625	325- 550	100- 350	0	0
Total***	7,600-8,200	7,000-7,700	6,600-7,400	5,900-6,800	5,000-6,300	3,900-5,600	3,200-5,200	2,200-4,200	1,800-3,400	1,600-3,400

* On the basis of present intelligence, we are not estimating a Flipper per se as seen in the 1961 air show. We believe a new all-weather fighter is under development and estimate that it may enter services by 1966.

** This estimate is based upon one production facility only.

*** Totals are rounded to two significant digits and may not agree with the sum of the unrounded components.

† This aircraft is described as "future model" in Table 7, NIE 11-14-63.

TOP SECRET
TOP SECRET

SOVIET INTERCEPTOR AIRCRAFT ASSIGNED TO AIR DEFENSE OF THE HOMELAND (PVO)
DEPLOYMENT BY TYPE BY AIR DEFENSE DISTRICT BY YEAR

Air Defense Districts	Mid-1961 Lo-Hi	Mid-1962 Lo-Hi	Mid-1963 Lo-Hi	Mid-1964 Lo-Hi	Mid-1965 Lo-Hi	Mid-1966 Lo-Hi	Mid-1967 Lo-Hi	Mid-1968 Lo-Hi	Mid-1969 Lo-Hi	Mid-1970 Lo-Hi
Northern										
All-Weather Interceptors 1/*	115- 125	125- 135	135- 145	135- 145	135- 145	135- 165	135- 165	100- 130	100- 130	100- 130
Clear-Air-Mass Interceptors 1/	165- 180	150- 170	130- 150	115- 135	90- 115	60- 90	50- 80	15- 60	0	0
Leningrad										
All-Weather Interceptors 1/	60- 80	70- 90	70- 100	70- 100	70- 105	70- 110	70- 110	45- 85	45- 85	45- 85
Clear-Air-Mass Interceptors 1/	200- 215	190- 200	160- 180	140- 160	110- 140	70- 100	45- 75	15- 50	0	0
Western										
All-Weather Interceptors 1/	70- 90	80- 100	80- 100	80- 100	85- 110	85- 120	90- 120	65- 100	65- 100	65- 100
Clear-Air-Mass Interceptors 1/	165- 180	145- 170	130- 150	110- 135	85- 115	55- 85	40- 70	10- 50	0	0
Moscow										
All-Weather Interceptors 1/	130- 170	145- 180	155- 195	155- 195	155- 200	140- 210	130- 210	120- 205	120- 205	120- 205
Clear-Air-Mass Interceptors 1/	520- 530	480- 500	425- 455	380- 410	320- 350	200- 240	150- 190	60- 130	10- 70	0

* Footnote on following page.

Air Defense Districts	Mid-1961 Lo-Hi	Mid-1962 Lo-Hi	Mid-1963 Lo-Hi	Mid-1964 Lo-Hi	Mid-1965 Lo-Hi	Mid-1966 Lo-Hi	Mid-1967 Lo-Hi	Mid-1968 Lo-Hi	Mid-1969 Lo-Hi	Mid-1970 Lo-Hi
Southwestern										
All-Weather Interceptors 1/*	65- 85	70- 90	80- 100	80- 100	80- 105	75- 110	80- 110	65- 95	65- 95	65- 95
Clear-Air- Mass Interceptors 1/	285- 300	275- 290	260- 280	210- 225	170- 200	115- 145	70- 105	30- 80	10- 30	0
Baku										
All-Weather Interceptors 1/	180- 190	195- 210	200- 225	200- 225	200- 240	190- 250	195- 250	160- 215	160- 215	160- 215
Clear-Air-Mass Interceptors 1/	585- 595	550- 570	490- 500	440- 465	340- 390	220- 280	140- 215	40- 100	20- 60	0
Sverdlovsk										
All-Weather Interceptors 1/	95- 105	100- 110	110- 125	110- 125	100- 130	95- 135	95- 135	80- 125	80- 125	80- 125
Clear-Air-Mass Interceptors 1/	585- 600	540- 560	480- 500	440- 470	330- 390	220- 280	145- 210	45- 145	30- 90	0
Tashkent										
All-Weather Interceptors 1/	20- 40	30- 45	35- 50	35- 50	25- 50	25- 55	25- 55	20- 50	20- 50	20- 50
Clear-Air-Mass Interceptors 1/	225- 340	200- 215	180- 200	160- 180	125- 155	80- 110	45- 85	10- 50	0	0
Trans-Siberian										
All-Weather Interceptors 1/	65- 80	70- 90	75- 100	75- 100	75- 100	70- 110	70- 110	60- 100	60- 100	60- 100
Clear-Air-Mass Interceptors 1/	540- 550	480- 500	460- 480	410- 440	300- 370	195- 270	115- 200	40- 140	20- 60	0

* Footnote on following page.

II D Soviet Surface-to-Air Missiles

II D1. Introductory Statement of Basic Trends and Assumptions

The Soviets now have operational three types of SAM systems. Two of these, the SA-1 and SA-2 systems, are designed primarily for defense against medium and high altitude attacks; the third, the SA-3 system, is probably designed to provide improved capabilities at lower altitudes. SA-1's are deployed only around Moscow, while SA-2's have been extensively deployed throughout the USSR. Deployment of the newest system, the SA-3, is expected to be limited and to be slow. It is assumed that all three systems will continue to be employed throughout the period of the IAP.

Continued activity has been observed at the SA-1 sites since IOC with reports of both GUILD and GUIDELINE missiles on sites. It is assumed that the system has been improved but it cannot be determined whether a modified GUILD and/or a GUIDELINE has been employed in the upgrading.

The SA-2 program is nearing completion.

we believe that the Soviets will eventually equip most of the sites with C-band radars. Evidence has been received of a modified GUIDELINE missile which appears to be associated with the FANSONG E radar.

Photography of SA-3 sites in the Murmansk region of the USSR has greatly increased our knowledge of this low-to-medium altitude SAM system. We believe that the SA-3 missile is limited to a 10-15 nm slant range capability between the altitudes of 1000 and 50,000 feet.

Colonel-General of Aviation S. Mironov stated that a surface-to-air missile on an assault gun chassis was being issued to troops in 1961. (Possibly for field service tests.) The fact that the SA-3 system has not yet been identified with field forces, and that it has mobility limitations -- as opposed to the presumed Soviet requirement for a highly mobile surface-to-air missile system for use with the field forces -- leads us to estimate that a SAM on an assault gun chassis will become available to the Soviet ground forces but not before 1965.

Recent wind tunnel analysis of a scale model of the Griffon missile has indicated that it may be more suited to the antiaircraft role than to the antimissile role.

We cannot exclude the possibility that the Griffon is a follow-on surface-to-air missile. The Griffon is estimated to have a range of 100 nm or more and an altitude capability of at least 100,000 feet.

II D2a. SAM Deployment Chart

Table II D2a contains alternative SA-2 deployment programs. The low side of the range reflects Alternate A and the high side reflects Alternate B.

Alternate A provides for completion of the defense patterns of those areas currently defended by the SA-2 system. It is estimated that this program will be completed by mid-1965. Alternate B will be a more extensive program than Alternate A; in addition to the defenses provided by Alternate A it will provide defenses for additional peripheral areas. It is estimated that this program would be completed by mid-1968.

SA-2s with Soviet Forces in Eastern Europe are estimated to be deployed as follows: 8 regiments or 24 battalions (sites) in East Germany, 1 regiment of 3 battalions in Poland and 1 regiment of 3 battalions in Hungary. It is assumed that one SAM regiment will be allocated to each of the six armies in East Germany as well as two additional regiments to HQ GSFG (Front HQ). One regiment each is to be allocated to NGF HQ in Poland and SGF HQ in Hungary.

Based on the pattern and number of SA-3 sites observed thus far, it is believed that the total SA-3 program will be small, about 200 sites, or less than 20% of the number of SA-2 sites. In estimating the total number of sites, it is assumed that only two areas will have an SA-3 perimeter defense: the Baltic Sea Coast (Leningrad to Kaliningrad), and the Polish border (Kaliningrad to Lvov).

Sites have been identified in the Murmansk areas, at Arkhangelsk, at Odessa and Sevanstopol, at Baku, in the Vladivostok/Ussuriysk area and at Petropavlovsk. SA-3 defense rings are estimated for Leningrad, Moscow and Plesetsk.

An alternative SA-3 program which, in addition to the above program, includes directional defenses for several strategic urban/industrial centers within several hundred miles of the border has been included in Table II D2a. It is assumed that SA-3 sites will not be deployed at deep interior targets of the USSR or with the Soviet Forces in Eastern Europe.

II D3

Little is known of the SA-1 T/O/E although it is the oldest of the SAM systems. Estimates for full manning of an SA-1 site have been placed at 450-600 officers and men. Each of the seven facilities supporting the SA-1 sites is estimated to have 1000-1800 officers and men. We have no basis for determining whether the sites have been or are at present fully manned. If they are fully manned we estimate that the total personnel strength (excluding any manning provision for regimental HQ) could range from 32,000 to 46,000 men.

All that is known of SA-1 equipment is that each site includes one YoYo radar facility, 60 vertical launchers/erectors, and a number of tractor-trailer missile carriers (probably at least 20). Because so little is known concerning the manning, organizational structure and equipment for SA-1 sites, a meaningful SA-1 T/O/E cannot be constructed at this time.

A great deal of evidence is available on SA-2 T/O/E. A T/E for an SA-2 firing battalion and a technical battalion with over-all figures for the regiment is given. An SA-2 site is manned by a SAM firing battalion of approximately 150 men (19 officers and 128 enlisted men). A technical battalion supporting four sites is manned by approximately 200 men (15 officers and 183 enlisted men). Four firing battalions, a technical battalion, and regimental headquarters make up an average SAM regiment in the USSR. The average SAM regiment for the field forces is comprised of three firing battalions, one technical support battalion, regimental headquarters, and one 57 mm AAA battalion (3 batteries - 18 guns). Each regiment requires about 1000 officers and men, 941 for the USSR regiment and 1085 for the field forces regiment.

Little information is available on manning requirements for the SA-3 system. However, it appears that fewer personnel support facilities are

present at SA-3 sites than at SA-2 sites and there is no evidence to indicate the enlarging of SA-2 facilities where SA-3 sites are colocated. It is assumed that approximately 100 officers and men will man an SA-3 site. An SA-3 regiment of (approximately 500 men) is assumed to include four launch battalions (sites) and a regimental HQ.

Although several items of SA-3 equipment have been identified to date a detailed T/E cannot at present be constructed. Equipment observed is as follows: one LOWBLOW radar, four large vans (perhaps one generator and three guidance and control), four dual launchers, 8 missile transporter vehicles, one FLATFACE radar and several unidentified vehicles.

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SA-2 TABLE OF EQUIPMENT (continued)

	Soviet Designator	Equipment for regiment	Equipment per firing battalion	Total firing bn equipment	Equipment for technical battalion	Total equipment for regiment (includes 4 firing battalions)
Mobile depot of spare parts for radar in van KUNG-P2 on trailer	2.PN-2		1	4		4
Generator (75 KVA)	ESD-75 M2MA		3	12		12
Generator on MAZ-200	ESD-12VS		1	4		4
Motor van (electric power supply)	RMA or R van		1	4		4
MERCURY GRASS (communications) on	ZIL-157		1	4		4
Special fuel in bulk	TG-02				10.5 ton	
Oxidizer in bulk (RFNA)	AK-20K				35 ton	
Isopropyl nitrate in bulk	OT-155				1.35 ton	

SOVIET SURFACE TO AIR MISSILE SITES
DEPLOYMENT BY SYSTEM BY AIR DEFENSE SYSTEM BY YEAR

Air Defense Districts	Mid-1961	Mid-1962	Mid-1963	Mid-1964	Mid-1965	Mid-1966	Mid-1967	Mid-1968	Mid-1969	Mid-197
Northern										
Regiments	3-5	10-13	13-15	15-18	15-19	17-23	17-25	17-25	17-25	17-25
SA-2 Sites	10-20	35-40	40-45	45-50	45-55	45-65	45-75	45-75	45-75	45-75
SA-3 Sites	0	5-10	10-15	15-20	15-20	20-25	20-25	20-25	20-25	20-25
Leningrad										
Regiments	8-12	15-18	19-23	23-27	28-32	32-34	32-34	32-34	32-34	32-34
SA-2 Sites	30-40	55-60	60-70	70-75	75-80	75-80	75-80	75-80	75-80	75-80
SA-3 Sites	0-5	5-10	15-20	20-30	35-45	50-55	50-55	50-55	50-55	50-55
Western										
Regiments	9-13	22-24	24-28	28-33	33-36	36-39	38-40	38-40	38-40	38-40
SA-2 Sites	30-40	65-70	70-80	80-90	90-95	95-100	95-100	95-100	95-100	95-100
SA-3 Sites	5-10	20-25	25-30	30-40	40-50	50-55	50-55	50-55	50-55	50-55
Alternate SA-3 Sites	5-10	20-25	25-30	30-40	40-50	50-55	55-60	55-60	55-60	55-60
Moscow										
Regiments	7-9	14-18	18-22	23-27	29-34	34-38	35-39	37-40	37-40	37-40
SA-2 Sites	25-35	50-60	65-75	80-90	100-115	115-125	115-125	115-125	115-125	115-125
SA-3 Sites	0	5-10	5-10	10-15	15-20	20-25	25-30	30-35	30-35	30-35
Southeastern										
Regiments	13-18	28-32	32-35	35-39	40-44	45-49	45-52	45-52	45-52	45-52
SA-2 Sites	30-70	110-120	120-130	135-145	150-160	170-175	170-175	170-175	170-175	170-175
SA-3 Sites	0	0-5	5-10	5-10	10-15	10-15	10-15	15-20	15-20	15-20
Alternate SA-3 Sites	0	0-5	5-10	5-10	10-15	15-20	25-30	25-30	25-30	25-30
Baku										
Regiments	8-10	17-20	23-27	27-33	32-35	37-39	37-40	37-40	37-40	37-40
SA-2 Sites	50-40	65-75	90-100	100-120	120-130	140-145	140-145	140-145	140-145	140-145
SA-3 Sites	0	0-5	0-5	5-10	5-10	5-10	5-10	5-10	5-10	5-10
Alternate SA-3 Sites	0	0-5	0-5	5-10	5-10	5-10	10-15	10-15	10-15	10-15

Air Defense Districts	Mid-1961	Mid-1962	Mid-1963	Mid-1964	Mid-1965	Mid-1966	Mid-1967	Mid-1968	Mid-1969	Mid-197
Sverdlovsk										
Regiments	13-19	25-28	30-33	33-35	38-40	40-42	40-42	40-42	40-42	40-42
SA-2 Sites	50-75	100-110	120-130	130-140	150-160	160-165	160-165	160-165	160-165	160-165
SA-3 Sites	0	0	0	0	0	0	0	0	0	0
Tashkent										
Regiments	5-10	18-20	20-22	22-25	28-30	32-34	32-34	32-34	32-34	32-34
SA-2 Sites	20-40	70-80	80-90	90-100	110-120	125-130	125-130	125-130	125-130	125-130
SA-3 Sites	0	0	0	0	0	0	0	0	0	0
Alternate SA-3 Sites	0	0	0	0	0	0-5	0-5	0-5	0-5	0-5
Trans-Siberian										
Regiments	5-10	13-15	18-20	23-25	25-30	29-40	29-50	29-50	29-50	29-50
SA-2 Sites	20-40	50-60	70-80	90-100	100-120	115-160	115-200	115-200	115-200	115-200
SA-3 Sites	0	0	0	0	0	0	0	0	0	0
Far East										
Regiments	5-8	14-18	19-23	24-27	27-33	27-49	28-57	28-69	28-69	28-69
SA-2 Sites	20-30	50-60	70-80	85-90	90-110	90-175	90-200	90-250	90-250	90-250
SA-3 Sites	0	5-10	5-10	10-15	15-20	15-20	15-20	15-20	15-20	15-20
Alternate SA-3 Sites	0	5-10	5-10	10-15	15-20	15-20	20-25	20-25	20-25	20-25
Soviet Forces in E. Europe										
Regiments	4-5	7-9	9-10	10-12	10-12	9-10	9-10	9-10	9-10	9-10
SA-2 Sites	10-15	20-25	25-30	30-35	30-35	25-30	25-30	25-30	25-30	25-30
Alternate SA-3 Sites	0	0	0	0	0	0	0	0	0	0
TOTALS*										
Regiments	80-120	190-220	220-260	260-310	300-350	330-400	340-430	340-440	340-440	340-440
SA-2 Sites	290-450	670-760	810-910	930-1100	1090-1200	1100-1400	1100-1500	1100-1500	1100-1500	1100-150
SA-3 Sites	5-15	40-75	65-100	95-140	130-180	160-210	170-220	170-220	170-220	170-220
Alternate SA-3 Sites	5-15	40-75	65-100	95-140	130-180	170-220	200-250	200-250	200-250	200-250

*Columns will not add to totals because of rounding.

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SA-2 TABLE OF EQUIPMENT

	Soviet Designator	Equipment for regiment	Equipment per firing battalion	Total firing bn equipment	Equipment for technical battalion	Total equipment for regiment (includes 4 firing battalions)
Missile	V-750		24			96
Booster	PRD-18R					
Warhead	DVR-750					
Igniting fuze	BT-750					
Autopilot	AP-75					
Launcher	SM-63-P		6			24
pulled by prime mover	AT-S		7			28
Missile transport & launcher loader	PR-11A		7			60
combined with prime mover	ZIL-157					
Control room automatic launch equipment	S-van		1			4
Receiving-transmitting van	PAA		1			4
w/three antenna trailers each						
Apparatus motor van	AA		1			4
~~Control motor van~~	~~VA~~		~~1~~			~~4~~
Missile guidance radar (FAN SONG)	SNR-75		1			4
IFF - (SCOREBOARD)			1			4
Spoonrest acquisition radar			1			4

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SA-2 TABLE OF EQUIPMENT (continued)

	Soviet Disignator	Equipment for regiment	Equipment per firing battalion	Total firing bn equipment	Equipment for technical battalion	Total equipment for regiment (includes 4 firing battalions)
Mobile testing station in motor van KUNG-1 on chassis of truck	KIPS-M157 ZIL-157				2	2
Portable fuel testing lab	PL-4MA				1	1
Mobile air compressor on truck	SM-14X ZIL-157				2	2
Air refuellers on ZIL-157	MS-4M				4	4
Fork lift truck on GAZ-51	100 Ye				2	2
Water washing down truck on ZIL-157	8T311				1	1
Movable pump for oxidizer on handcart	PNO-I				1	1
Movable pump for fuel on handcart	PNO-I				1	1
Dolly for missile	TST-115 Ye				16	16
Truck Cranes	K-51				2	2
Auxiliary diesel electric station	ESD-50VS				1	1

SA-2 TABLE OF EQUIPMENT (continued)

	Soviet Designator	Equipment for regiment	Equipment per firing battalion	Total firing bn equipment	Equipment for technical battalion	Total equipment for regiment (includes 4 firing battalions)
Mobile workshop on ZIL-157	KRAS-IR				1	1
Mobile workshop on ZIL-157	KRAS-IM				1	1
Autorefuellers for fuel on GAZ-63	ZAK-32M				2	2
Autorefuellers for fuel	ZAK-41A				2	2
Transport packed missile	MAZ-502				1	1
Auto semi trailers W/prime mover ZIL-584	MLS-584					
Fire fighting equipment		X 1/				X
Ambulance		X				X
Semitrailer tank truck (oxidizer) on ZIL-157	ZAK-21CM				2	2
Semitrailer tank truck (fuel)	ZAK-21CTM				1	1
Personnel carrier		X				X
Jeep	GAZ-69	X				X

1/ These general purpose vehicles have been observed associated with the SA-2 system. We have assumed that they are assigned at the regiment level. The number of such vehicles cannot be determined at this time.

II D 3

I

SA-2 Regiment T/O

USSR

	Number per Regt.	Officers	Enlisted	Total
Regt. Hdqtrs	(1)	23	132	155
Firing battalions	(4)	76	512	588
Technical Support Bn	(1)	15	183	198
Totals		114	827	941

SA-2 Regt Org Field Forces (USMC)

Regt Hdqtrs	(1)	23	132	155
Firing battalions	(3)	57	384	441
Tech Supp battalion	(1)	15	183	198
57 AAA battalion* (3 batteries - 18 guns)		21	270	291
Totals		116	969	1,085

* Figures for 57 MM AAA Battalion include headquarters and support elements.

II

Estimated Table of Organization of Major Elements of a SA-2 Regiment

	Officers	Enlisted	Total
Regimental Headquarters			
Hq & Hq Platoon	16	76	92
Regt. Services	7	56	63
Totals	23	132	155
Firing Battalion			
Hq & Hq Battery	6	63	69
Launch Battery	4	44	48
Radio Engineering Battery	9	21	30
Totals	19	128	147
* 57 MM AAA Battery	4	69	73
Technical Support Battalion			
Hq & Hq Battery	9	75	84
Control/Test Group	1	12	13
Assembly/Disassembly Group	1	22	23
Fueling Group	1	24	25
Electric Power Station		3	3
Repair Station			
(a) missile	1	11	12
(b) radar	1	11	12
Trans & Heavy Equip Group	1	24	25
Chemical Laboratory		1	1
Totals	15	183	198

* The 57 MM AAA Battery is used as a complementary system with the SAM firing battalion in field forces only

Section II F

Anti-Missile Defenses

ABM deployment has been limited to three probable complexes at Leningrad and four possible complexes at Moscow. We have no basis upon which to judge whether or not the Soviets are planning to deploy the possible Moscow system at other locations. Table II F 2a contains three alternatives for Soviet ABM defenses through 1970. Deployment alternative A assumes that only Moscow and Leningrad will be ABM defended by mid-1970. Alternate B assumes that eight locations will be defended by mid-1970. Alternate C assumes a defense of 20 cities by mid-1970. Defended areas were selected primarily on the basis of population and industry because we feel that these areas will be given priority over military targets.

[redacted] information suggests that the Soviet antimissile defense forces may be integrated into the air defense system of the Soviet Union, perhaps subordinate to the PVO Strany. We have no basis upon which to estimate the organization of the lower echelons of the anti-missile forces.

Each of the ABM complexes at Leningrad is estimated to be manned by about 1100 men. This estimate is based upon the analysis of living quarters associated with the complexes. The number of men required per complex could be in excess of 1100 if support operations are not performed at the sites. A reasonable functional breakdown of the 1100 men follows: 50 men at headquarters, 750 men with the launch unit, 100 men to maintain and operate the electronic equipment, and 200 men in service units.

The final configuration of the suspect complexes in the Moscow area is not yet apparent. Four or five possible barracks, suitable for housing 1000 to 1500 men, have been noted at each complex.

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The final configuration of the suspect complexes in the Moscow area is not yet apparent. Four or five possible barracks, suitable for housing 1000 to 1500 men, have been noted at each complex.

DEPLOYMENT OF SOVIET STRATEGIC ANTI-BALLISTIC MISSILE DEFENSES

DEFENDED AREAS	Mid-1961	Mid-1962	Mid-1963	Mid-1964			Mid-1965			Mid-1966			Mid-1967			Mid-1968			Mid-1969			Mid-1970		
Deployment Alternatives				A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Leningrad				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		1	1
Moscow										1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Other Cities or Areas														2	3		4	8		6	13		6	18
Population Over 1,000,000 (specify)					(1)	(1)		(1)	(1)		(2)	(2)		(3)	(4)		(5)	(7)		(6)	(8)		(6)	(8
Population over 500,000 (specify)														(1)	(1)		(1)	(3)		(2)	(7)		(2)	(1
TOTAL DEFENDED AREAS				1	1	1	1	1	1	2	2	2	2	4	5	2	6	10	2	8	15	2	8	2

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INITIAL OPERATIONAL CAPABILITY AT DEFENDED AREAS

Alternative A

By Mid-64

Leningrad

By Mid-66

Moscow

Alternative B

By Mid-64

Leningrad

By Mid-66

Moscow

By Mid-67

Donetsk Area

Kuybyshev

By Mid-68

Gorkiy

Novosibirsk

By Mid-69

Sverdlovsk

Kiev

Alternative C

By Mid-64

Leningrad

By Mid-66

Moscow

By Mid-67

Donetsk Area

Kuybyshev

Gorkiy

By Mid-68

Novosibirsk

Sverdlovsk

Kiev

Kazan

Kharkov

By Mid-69

Omsk

Chelyabinsk

Dnepropetrovsk

Perm

Tashkent

By Mid-70

Tbilisi

Saratov

Ufa

Voronezh

Volgograd

II H Soviet Air and Missile Defense Missile Inventories

In deriving SAM inventory numbers, the following missile/launcher ratios are used: SA-1 with 60 launchers per site...5:1 (1:1 on site, 3:1 reserve at support facility, 1:1 reserve at higher echelon, pipeline and training); SA-2 with 6 launchers per site... 6:1 (2:1 on site, one on launcher and one in hold revetment; 2:1 reserve at central support site; and 2:1 reserve at higher echelon, pipeline and training); SA-3 with 4 dual launchers per site... 8:1 (2:1 on site, 4:1 reserve on site, 2:1 reserve at higher echelon, pipeline and training).

II-H

SOVIET AIR AND MISSILE DEFENSE MISSILE INVENTORIES

A. ON LAUNCHER

B. RESERVE IN FIRING UNITS

C. RESERVE AT HIGHER ECHELON, PIPELINE & TRAINING

TYPE	MID-1961 A	MID-1961 B	MID-1961 C	MID-1962 A	MID-1962 B	MID-1962 C	MID-1963 A	MID-1963 B	MID-1963 C	MID-1964 A	MID-1964 B	MID-1964 C	MID-1965 A	MID-1965 B	MID-1965 C
SA-1	3360	10080	3360	3360	10080	3360	3360	10080	3360	3360	10080	3360	3360	10080	3360
SA-2	1740-2700	5220-8100	3480-5400	4020-4560	12060-13680	8040-9120	4860-5460	14580-16380	9720-10920	5500-6600	16740-19800	11160-13200	6000-7200	18000-21600	12000-14400
SA-3	40-120	80-240	40-120	320-600	640-1200	320-600	520-800	1040-1600	520-800	760-1120	1520-2240	760-1120	1080-1440	2160-2880	1080-1440
Alt. SA-3	40-120	80-240	40-120	320-600	640-1200	320-600	520-800	1040-1600	520-800	760-1120	1520-2240	760-1120	1080-1440	2160-2880	1080-1440

TYPE	MID-1966 A	MID-1966 B	MID-1966 C	MID-1967 A	MID-1967 B	MID-1967 C	MID-1968 A	MID-1968 B	MID-1968 C	MID-1969 A	MID-1969 B	MID-1969 C	MID-1970 A	MID-1970 B	MID-1970 C
SA-1	3360	10080	3360	3360	10080	3360	3360	10080	3360	3360	10080	3360	3360	10080	3360
SA-2	6600-8400	19800-25200	13200-16800	6600-9000	19800-27000	13200-18000	6600-9000	19800-27000	13200-18000	6600-9000	19800-27000	13200-18000	6600-9000	19800-27000	13200-18000
SA-3	1360-1680	2720-3360	1360-1680	1400-1720	2800-3440	1400-1720	1400-1720	2800-3440	1400-1720	1400-1720	2800-3440	1400-1720	1400-1720	2800-3440	1400-1720
Alt. SA-3	1400-1760	2800-3520	1400-1760	1640-1960	3280-3920	1640-1960	1680-2000	3360-4000	1680-2000	1680-2000	3360-4000	1680-2000	1680-2000	3360-4000	1680-2000

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Section III A 2 Soviet Tactical Missile Forces

Since the end of World War II, the Soviets have developed, produced, and deployed a number of short-range ballistic and cruise guided missile weapons as well as free rocket over ground (FROG) weapons for the tactical support of ground force operations. The widespread deployment of these weapons has greatly increased the firepower available to the Soviet field forces. (See table III A 2a for estimates of deployment.) They have provided the ground forces with a major nuclear delivery capability.

A. Ballistic Missile Systems

It is generally accepted that the SS-1a, (SCUNNER) the Soviet version of the German World War II V-2 missile with a range of 150 nm, is no longer deployed with tactical units of the Soviet ground forces. Between 1954 and 1958 about 50 SS-1a crews -- 25 battalions -- were trained. The replacement of the SS-1a was signaled in 1959 when SS-1a crew training ended and SS-1b (SCUD) training was expanded. We estimate that the SS-1a was phased out of operational units before 1961.

We believe that the SS-2 (SIBLING) 300 nm ballistic missile has been withdrawn from the Soviet tactical missile forces without the development of a follow-on ballistic system of similar range. Training firings for the SS-2 continued until mid-1962 at which time the ballistic missile activity on the 300 nm range at Kapustin Yar was terminated. About 40-60 SS-2 crews are estimated to have been trained between 1954 and mid-1961. This number of crews would be sufficient to man about 20-30 battalions. We believe that all of the battalions were deactivated by early 1963 in favor of the cruise missile system (SSC-1, SHADDOCK). The basic load* of the SS-2 system is estimated to have been 2 missiles with 6 in reserve at higher units.

* The term, basic load, refers to the number of missiles per deployed launcher with the operating unit.

As the state-of-the-art advances, a follow-on missile for the SSC-1 may be developed toward the end of this decade. The basic load of the follow-on ballistic missile is assumed to be 2 missiles per launcher with a total stock of 6 missiles per launcher including those in reserve at higher units.

Mobile SS-1b surface-to-surface ballistic missiles have been available in combat support units in the Soviet ground force since 1958. Deployment with the Group of Soviet Forces Germany (GSFG) probably occurred in small numbers in 1959. Deployment in forward areas -- i.e., the groups of forces outside the USSR and the border military districts -- may have been completed in 1961. There is good evidence that one brigade consisting of six launchers is deployed with each army in the GSFG. There is also evidence which indicates the possible deployment of this missile system with the Southern Group of Forces (SGF) in Hungary as well as with Soviet forces located in several Soviet western and southern military districts. We estimate that a total of about 20-25 SS-1b brigades (120-150 launchers) was available to the Soviet ground force in mid-1961.

The SS-1b launcher fires either the 8A61, estimated to be capable of delivering an HE warhead to 150 nm, or the 8K11, estimated to be capable of delivering a nuclear warhead to 75 nm.

Continuation of 75 nm range firings in 1963 suggests continued 8K11 training or firing of the SS-1c to half range. Inventory figures in 1961-62 (Table III A2a) include both missiles (8A61 and 8K11) fired from the SS-1b launchers. The 1963-67 estimates include only the 8K11 missiles. The basic load for the SS-1b system is believed to be 3 missiles,* with an additional 3 held in reserve at army level and an additional 3 to 6 missiles in reserve at higher units, pipeline and training. The evidence on production of the SS-1b indicates that the desired basic load was probably not achieved by 1961 but may have been achieved by 1963. Thus, the figures in Table III A2b show a basic load of only 2 missiles per launcher until 1963.

*

We believe that the existing SS-1b brigades are being phased out as the new 150 nm nuclear-armed ballistic missile, the SS-1c, is introduced. We estimate that by the end of 1962 a sufficient number of crews for the new missile were trained to man at least 2 and possibly 4 brigades (12-20 launchers) and photography of May and June of 1963 confirms the deployment of the system with the GSFG. The number of SS1b and SS-1c launchers was estimated on the basis of an analysis of launch crew training at KYMTR. The basic load and reserves per launcher are estimated to be the same as those for the SS-1b.

The current Soviet 150 nm tactical missiles are essentially improvements of the German WW II Wasserfall system. We estimate that these missile systems will have outlived their military effectiveness by 1970, leading to their phase-out by that date. We have assumed that a follow-on 150 nm missile, possibly solid fueled, will be deployed with Soviet forces in the latter half of the decade.

B. Cruise Missile Systems

Surface-to-surface cruise missiles have been deployed in support of the ground forces since 1957. The first cruise missile deployed with Soviet ground forces was probably the OSA/KOMAR SS N-2 (SS C-2) missile adapted to a land role. The estimated total number of SS C-2 equipped regiments is based upon an assumed allocation of one regiment (12 launchers) to each Soviet army. The basic load is assumed to be 6 missiles per launcher with an additional 6 at regimental level and 12 in reserve at higher units.

The SS C-1 system was noted in combat support elements of the ground forces in 1961. A total of eight missiles is assumed to be required for each launcher: one on launcher, two at the regimental level and 5 in reserve at higher units.

C. Free Rockets Over Ground

The FROG-3 and FROG-4 are believed to be deployed with all the divisions of the GSFG. In addition, FROG battalions are probably deployed with all Category I divisions within the USSR.

A FROG battalion is currently believed to be composed of two launchers although recent evidence suggests that it may be composed of three launchers. Estimates for the 1961-63 period are calculated on the basis of two launchers per battalion and for the 1964-68 period on the basis of three launchers per battalion.

The FROG-3 and FROG-4 are believed to be the same rocket with different warheads. Estimates of FROG-3 and FROG-4 rockets have therefore been combined in Table III A 2b. The basic load of the FROG launchers is believed to be 4 rockets, based upon the capabilities of the ZIL-157 FROG transporter and discussion of the 2P2 launchers and 3R7 rocket. An additional 8 rockets are assumed to be held at army level. Total stocks per launcher are estimated through analogy with the US Honest John system which has 50 rockets per launcher.

It is estimated that the free rockets will be phased out of the Soviet ground forces by 1969 and that an improved weapons systems will replace them. This follow-on system may be a solid-fueled guided missile of 30-40 nm range capable of being fired from a variety of military vehicles. It is assumed that the basic load and reserves of this system will be similar to those of the current FROG.

D. Surface-to-Air Missiles

It is estimated that by mid-1963, 30 to 40 SA-2 regiments were deployed with the Soviet Ground Forces as PVO missile units. This would provide one regiment for each of 23 armies and a minimum of one for each of 7 Front or Front equivalent organizations.

SA-2 units with the field forces are assumed to possess a basic load of 6 missiles per launcher, at the launch battalion and regimental support site. Three missiles are assumed to be held at the army missile supply point. The Front reserves and spares are assumed to be equal to army reserves, providing a total of 12 missiles per launcher.

Colonel-General of Aviation S. Mironov stated that a surface-to-air missile on an assault gun chassis was being issued to troops in 1961. (Possibly for field service tests.) The fact that the SA-3 system has not been identified to date with field forces,

its mobility limitations, and the presumed Soviet requirement for a highly mobile surface-to-air missile system for use with the field forces leads us to estimate that a SAM on an assault gun chassis will become available to the Soviet ground forces, but not before 1965.

E. Field ABM

It has been assumed that the Soviet requirement for such a system will be met by the deployment of a system of limited mobility beginning in 1966 and supplemented by a more effective and mobile system in 1968.

The limited system is assumed to be organized on the basis of three battalions per brigade, and 2 brigades deployed per front. The improved, mobile system is assumed to be organized on the basis of 4 battalions per brigade and 1 brigade per army.

The basic load of the limited system is assumed to be 2 missiles per launcher with an additional 2 missiles at front level and 4 missiles in reserve. The basic load of the mobile Field ABM system is assumed to be 4 missiles per launcher, with 4 at army level, and an additional 8 missiles in reserve.

F. Anti-Tank Guided Missiles

The SNAPPER and the SWATTER (ATGM) were first observed in 1962. They are probably deployed in regimental formations armed with 27 launcher vehicles subordinated to both tank and mechanized rifle armies. The estimate of anti-tank regiments has been made on the basis of one for each of the 23 armies of the Soviet Union in 1963.

These simple wire-guided missiles are believed to have been initially deployed in 1961. They were shipped to Iraq in 1962 and observed in the GSFG in May 1963. The basic load per launcher vehicles is assumed to be 6 for the SNAPPER and 8 for the SWATTER. Total stocks, based on US analogy, are assumed to be 100 missiles for the SNAPPER and 125 for the SWATTER launch vehicles.

It is assumed that a similar but improved weapon will be produced to replace the SNAPPER and SWATTER. It may be deployed with field forces in the latter part of the decade. The basic load and reserves of this weapon are assumed to be the same as that of the SWATTER.

A summary of the factors used in developing the tactical missile inventories for each system is given below:

SOVIET TACTICAL MISSILE FORCES TOTAL STRENGTHS BY SYSTEMS AT MID-YEARS

	1961		1962		1963		1964		1965		1966		1967		1968		1969		1970	
	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi
BALLISTIC MISSILES																				
SS-1b (SCUD-A)																				
Batteries (1 launcher)	120	150	90	115	60	75	60	65	60	70	50	60	30	40	10		0		0	
Battalions (3 launchers)	40	50	30	39	20	25	20	25	20	21	17	20	10	14	0		0		0	
Brigades (6 launchers)	20	25	15	20	10	13	10	13	10	12	9	10	5	7	0		0		0	
SS-1c (SCUD-B)																				
Batteries (1 launcher)	0	1	10	20	40	50	60	75	60	90	60	90	60	90	60	80	40	50	0	0
Battalions (3 launchers)	0	1	4	7	14	17	20	25	20	30	20	30	20	20	20	20	14	17	0	0
Brigades (6 launchers)	0	1	2	4	7	9	10	13	10	15	10	15	10	15	10	14	7	9	0	0
Follow-On 150-mm Missile																				
Launchers	0	0	0	0	0	0	0	0	0	0	0	0	[20	29]	[60	70]	[80	100]	[90	120]
Battalions (4 launchers)	0	0	0	0	0	0	0	0	0	0	0	0	[0	5]	[15	17]	[20	25]	[22	30]
Brigades (8 launchers)	0	0	0	0	0	0	0	0	0	0	0	0	[0	3]	[8	9]	[10	13]	[11	15]
SS-2 Launchers (Battery)	40	60	15	20	0	0	0	0	0	0	0	0	0		0		0		0	
Battalions (2 launchers)	20	30	8	10	0	0	0	0	0	0	0	0	0		0		0		0	
Follow-On System Launchers	0	0	0	0	0	0	0	0	0	0	0	0	0		[0	5]	[10	15]	[20	35]
Battalions (2 launchers)	0		0		0		0		0		0		0		0		0		0	
CRUISE MISSILES																				
SS-C-2 Cruise Missile																				
Launchers	180	230	180	280	120	220	60	110	0		0		0		0		0		0	
Batteries (2 launchers)	90	140	90	140	60	110	30	55	0		0		0		0		0		0	
Battalions (4 launchers)	45	70	45	70	30	55	15	27	0		0		0		0		0		0	
Regiments (12 launchers)	15	24	15	23	10	18	5	9	0		0		0		0		0		0	

Follow-On Short Range Ballistic Missile

Launchers

	1961 Lo	1961 Hi	1962 Lo	1962 Hi	1963 Lo	1963 Hi	1964 Lo	1964 Hi	1965 Lo	1965 Hi	1966 Lo	1966 Hi	1967 Lo	1967 Hi	1968 Lo	1968 Hi	1969 Lo	1969 Hi	1970 Lo	1970 Hi
S-C-1 SHADDOCK																				
Launchers	30	40	40	50	50	70	60	75	75	100	75	100	75	100	75	100	50	75	25	50
Battalions (2 launchers)	15	20	20	25	25	35	30	37	38	50	38	50	38	50	38	50	25	38	13	25
Regiments (4 launchers)	8	10	10	13	13	18	15	18	19	25	19	25	19	25	19	25	13	19	7	13
Follow-On System - None																				
REE ROCKETS OVER GROUND																				
Launchers (Modified PT-76)	40	80	80	120	120	160	180	270	180	270	180	240	90	150	0	60	0	0	0	0
Battalions	20	40	40	60	60	80	60	90	60	90	60	80	30	50	0	20	0	0	0	0
AT-1																				
Follow-On Short Range Rocket																				
Launchers	0		0		0		0		0		0 / 0	30 / 10	90 / 30	120 / 40	180 / 60	210 / 70	180 / 60	270 / 90	180 / 60	270 / 90
Battalions (3 launchers)	0		0		0		0		0											
SURFACE-TO-AIR MISSILES																				
SA-2 Launchers	360	540	450	630	540	720	540	720	540	720	360	540	360	540	360	540	360	540	360	540
Battalions (6 launchers)	60	90	75	105	90	120	90	120	90	120	60	90	60	90	60	90	60	90	60	90
Regiment (18 launchers)	20	30	25	35	30	40	30	40	30	40	20	30	20	30	20	30	20	30	20	30
SAM on Assault Gun Chassis																				
Launchers	0		0		0		0		0 / 0	40 / 10	80 / 20	120 / 30	240 / 60	320 / 80	400 / 100	480 / 120	400 / 100	480 / 120	400 / 100	480 / 120
Battalion (4 launchers)	0		0		0		0		0 / 0	10 / 4	20 / 7	30 / 10	60 / 20	80 / 27	100 / 34	120 / 40	100 / 34	120 / 40	100 / 34	120 / 40
Regiment (12 launchers)	0		0		0		0													
FIELD ARM SYSTEMS																				
Limited Mobility System																				
Launchers	0		0		0		0		0		0 / 0	30 / 10	90 / 30	150 / 50	180 / 60	240 / 80	180 / 60	240 / 80	180 / 60	240 / 80
Battalions (6 launchers)	0		0		0		0		0		0 / 0	10 / 3	30 / 15	50 / 25	60 / 30	80 / 40	60 / 30	80 / 40	60 / 30	80 / 40
Brigades (18 launchers)	0		0		0		0		0		0 / 0	3 / 1	15 / 5	25 / 9	30 / 10	40 / 14	30 / 10	40 / 14	30 / 10	40 / 14

	1961 Lo	1961 Hi	1962 Lo	1962 Hi	1963 Lo	1963 Hi	1964 Lo	1964 Hi	1965 Lo	1965 Hi	1966 Lo	1966 Hi	1967 Lo	1967 Hi	1968 Lo	1968 Hi	1969 Lo	1969 Hi	1970 Lo	1970 Hi
Mobile System																				
Launchers, dual	0		0		0		0		0		0		0		7	40%	40	80%	60	120%
Battalions (4 launchers)	0		0		0		0		0		0		0		7	10%	10	20%	10	30%
Brigades (16 launchers)	0		0		0		0		0		0		0		7	3%	3	5%	7	11%
ANTI-TANK GUIDED MISSILES																				
MAPPER - Swatter																				
Launcher vehicles	100	200	300	450	500	600	500	600	500	600	500	600	500	600	300	400	100	200	0	
Battalions (9 launcher vehicles)	12	23	34	45	56	67	56	67	56	67	56	67	56	67	34	45	12	23	0	
Regiment (27 launcher vehicles)	4	8	12	15	19	23	19	23	19	23	19	23	19	23	12	15	4	8	0	
TCM-Follow-On System																				
Launchers	0		0		0		0		0		0		0		100	200	300	400	500	600
Battalions (9 launchers)	0		0		0		0		0		0		0		12	23	34	45	56	57
Regiments (27 launchers)	0		0		0		0		0		0		0		4	8	12	15	19	23

MISSILE INVENTORY FACTORS PER LAUNCHER

Missile	Basic Load	Tactical Reserve	Reserve in Higher Unit	Total
SS-1b (SCUD-A)	3	3	3-6	9-12
SS-1c (SCUD-B)	3	3	3-6	9-12
SS-2	4	4	4	8
SSC-1 (SHADDOCK)	1	2	5	8
SSC-2 (KOMAR)	4	6	12	24
FROG ROCKET	4	8	38	50
SA-2	6	3	3	12
SA or Assault Gun Chassis	6	6	12	24
Field ABM (limited system)	2	2	4	8
Field ABM (mobile system)	4	4	8	16
CHAFFEE	6	30	64	100
SWATTER	8	40	77	125

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THEATER GROUND FORCE MISSILE INVENTORIES BY YEAR 1/

A. Table A* BASIC LOAD

Type	Mid-1961 A	Mid-1962 A	Mid-1963 A	Mid-1964 A	Mid-1965 A	Mid-1966 A	Mid-1967 A	Mid-1968 A	Mid-1969 A	Mid-1970 A
SS-1a	0	0	0	0	0	0	0	0	0	0
SS-1b	240- 300	180- 230	180- 230	180- 230	180- 230	150- 180	90- 120	0	0	0
SS-1c	0	30- 60	120- 150	180- 230	180- 270	180- 270	180- 270	180- 270	120- 150	0
SS-2	80- 120	30- 40	0	0	0	0	0	0	0	0
SS-1c Follow-on	0	0	0	0	0	0	[0- 60]	[180- 210]	[240- 300]	[270- 360]
SS-2 Follow-on	0	0	0	0	0	0	0	[0- 20]	[40- 60]	[80- 140]
SSC-1	30- 40	40- 50	50- 70	60- 75	75- 100	75- 100	75- 100	75- 100	50- 75	25- 50
SSC-2	1100-1700	1100-1700	720-1300	360- 660	0	0	0	0	0	0
FROG-1	0	0	0	0	0	0	0	0	0	0
FROG-2	0	0	0	0	0	0	0	0	0	0
FROG-3) - FROG-4)	160- 320	320- 480	480- 640	720-1100	720-1100	720- 960	360- 600	0- 240	0	0
Follow-on FROG SYSTEM	0	0	0	0	0- [	[0- 120]	[360- 480]	[720- 840]	[720-1100]	[720-1100]
SA-2	2200-3200	2700-3800	3200-4300	3200-4300	3200-4300	2200-3200	2200-3200	2200-3200	2200-3200	2200-3200
SA on assault gun chassis	0	0	0	0	[0- 240]	[480- 720]	[1400-1900]	[1600-2900]	[1600-2900]	[1600-2900]
ABM-Field										
Limited System	0	0	0	0	0	[0- 120]	[180- 300]	[360- 480]	[360- 480]	[360- 480]
Mobile System	0	0	0	0	0	0	0	[0- 160]	[160- 320]	[240- 480]
ATGM SNAPPER	300- 600	900-1200	1500-1800	1500-1800	1500-1800	1500-1800	1500-1800	900-1200	300- 600	0
ATGM SWATTER	400- 800	1200-1600	2000-2400	2000-2400	2000-2400	2000-2400	2000-2400	1200-1600	400- 800	0
ATGM Follow-on								400- 800	1200-1600	2000-2400

1/ [illegible] use ranges or other indication of uncertainty as appropriate. 2/ See text. * Basic load.

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THEATER GROUND FORCE MISSILE INVENTORIES BY YEAR 1/

B. Table B*, Tactical Reserves

Type	Mid-1961 B	Mid-1962 B	Mid-1963 B	Mid-1964 B	Mid-1965 B	Mid-1966 B	Mid-1967 B	Mid-1968 B	Mid-1969 B	Mid-1970 B
SS-1a	0	0	0	0	0	0	0	0	0	0
SS-1b	240- 300	180- 230	180- 230	180- 230	180- 230	150- 180	90- 120	0	0	0
SS-1c	0	30- 60	120- 150	180- 230	180- 270	180- 270	180- 270	180- 270	120- 150	0
SS-2	80- 120	30- 40	0	0	0	0	0	0	0	0
SS-1c Follow-on	0	0	0	0	0	0	[0- 60]	[180- 210]	[240- 300]	[270- 360]
SS-2 Follon-on	0	0	0	0	0	0	0	0	0	0
SSC-1	60- 80	80- 100	100- 140	120- 150	150- 200	150- 200	150- 200	150- 200	100- 150	50- 100
SSC-2	1100-1700	1100-1700	720-1300	360- 660	0	0	0	0	0	0
FROG-1	0	0	0	0	0	0	0	0	0	0
FROG-2	0	0	0	0	0	0	0	0	0	0
FROG-3) - FROG 4)	320- 640	640- 960	960-1300	1400-2200	1400-2200	1400-1900	720-1200	0- 480	0	0
Follow-on FROG System	0	0	0	0	0	[0- 240]	[720- 960]	1400-1700	1400-2200	1400-2200
SA-2	1100-1600	1300-1900	1600-2200	1600-2200	1600-2200	1600-2200	1100-1600	1100-1600	1100-1600	1100-1600
SA on assault gun chassis	0	0	0	0	[0- 240]	[480- 720]	[1400-1900]	[1600-2900]	[1600-2900]	[1600-2900]
ABM Field										
Limited system	0	0	0	0	0	[0- 120]	[180- 300]	[360- 480]	[360- 480]	[360- 480]
Mobile System	0	0	0	0	0	0	0	[0- 160]	[160- 320]	[240- 480]
ATGM SNAPPER	1500-3000	4500-6000	7500-9000	7500-9000	7500-9000	7500-9000	7500-9000	4500-6000	1500-3000	0
ATGM SWATTER	2000-4000	6000-8000	10000-12000	10000-12000	10000-12000	10000-12000	10000-12000	6000-8000	2000-4000	0
ATGM Follow-on								2000-4000	6000-8000	10000-12000

1. In presenting mid-year figures, use ranges or other indicators of uncertainty as appropriate.

THEATER GROUND FORCE MISSILE INVENTORIES BY YEAR 1/

C. Table C Reserves at Higher Units, Pipeline, Training

Type	Mid-1961 C	Mid-1962 C	Mid-1963 C	Mid-1964 C	Mid-1965 C	Mid-1966 C	Mid-1967 C	Mid-1968 C	Mid-1969 C	Mid-1970 C
SS-1a	0	0	0	0	0	0	0	0	0	0
SS-1b	120- 300	320- 420	300- 400	280- 380	260- 360	300- 450	400- 550	0	0	0
SS-1c	10- 20	30- 120	120- 300	180- 450	180- 540	180- 540	180- 540	180- 540	120- 300	0
SS-2	180- 240	250- 370	0	0	0	0	0	0	0	0
SS-1c follow-on	0	0	0	0	0	0	/0- 120/	/180- 420/	/240- 600/	/270- 720/
SS-2 follow-on	0	0	0	0	0	0	0	/0- 40/	/80- 120/	/80- 140/
SSC-1	150- 200	200- 250	250- 350	300- 380	380- 500	380- 500	380- 500	380- 500	250- 380	120-
SSC-2	2200-3400	2200- 3400	1400- 2600	720- 1300	0	0	0	0	0	0
FROG-1	0	0	0	0	0	0	0	0	0	0
FROG-2	0	0	0	0	0	0	0	0	0	0
FROG-3)-FROG-4)	1500-3000	3000- 4600	4600- 6100	6800-10300	6800-10300	3400- 5700	0- 230	0	0	0
Follow-on FROG System	0	0	0	0	0	/0- 1100/	/3400- 4600/	/6800- 8000/	/6800-10300/	/6800-10300/
SA-2	1100-1600	1300- 1900	1600- 2200	1600- 2200	1600- 2200	1600- 2200	1100- 1600	1100- 1600	1100- 1600	1100- 1600
SA-3 on assault gun chassis	0	0	0	0	/0- 480/	/960- 1400/	/2900- 3800/	/4800- 5800/	/4800- 5800/	/4800- 5800/
ABM Field										
Limited System	0	0	0	0	0	/0- 240/	/360- 600/	/720- 960/	/720- 960/	/720- 960/
Mobile System	0	0	0	0	0	0	0	/0- 320/	/320- 640/	/480- 960/
ATGM SNAPPER	3200-6400	9600-12800	16000-19200	16000-19000	16000-19000	16000-19000	16000-19000	9600-12800	3200- 6400	0
ATGM SWATTER	3900-7700	11500-15400	19300-23100	19300-23100	19300-23100	19300-23100	19300-23000	11500-15400	3900- 7700	0-
ATGM Follow-on								3900- 7700	11500-15400	19300-23000

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Section III B Soviet General Purpose Aviation

SOVIET GENERAL PURPOSE AVIATION -- NUMBERS OF COMBAT UNITS AND AIRCRAFT BY MODEL BY YEAR 1/*

Alternative A: Lowside of Force, Table 7, Annex A, NIE 11-14-62
Alternative B: Highside of Force, Table 7, Annex A, NIE 11-14-62

	Mid-1961		Mid-1962		Mid-1963		Mid-1964		Mid-1965		Mid-1966		Mid-1967		Mid-1968		Mid-1969		Mid-1970	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Tactical Air Armies	12	14	12	14	12	14	12	14	12	14	10	14	10	14	8	14	8	14	8	14
Fighter Corps	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Fighter Divisions																				
Fighter Regiments	74	80	68	75	65	75	60	72	50	66	40	66	39	64	36	61	30	56	24	54
FAGOT	265	305	215	260	120	165	40	80	0	0	0	0	0	0	0	0	0	0	0	0
FRESCO	1,800	1,900	1,500	1,600	1,250	1,350	900	1,000	500	650	200	500	100	300	0	50	0	0	0	0
FARMER	400	450	350	400	325	375	250	300	200	250	75	200	25	125	0	100	0	0	0	0
FISHBED	150	175	275	325	425	525	540	700	650	900	700	1,000	750	1,100	750	1,100	600	950	450	850
FITTER	50	75	125	150	275	300	325	500	450	600	525	725	550	750	550	750	500	700	400	600
TF-1967	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	200	0	400	0	500
Fighter Recon Rgts	5	9	7	11	8	12	7	11	6	10	5	8	3	6	2	4	0	3	0	2
FAGOT	35	45	35	40	30	35	10	20	0	0	0	0	0	0	0	0	0	0	0	0
FLASHLIGHT	50	75	75	100	100	125	100	125	100	125	75	100	50	75	25	50	10	40	0	35
Light Bomber Division																				
Lt Bomber Rgts**	27	32	18	29	10	15	9	14	10	18	10	18	13	19	13	19	13	19	13	19
BEAGLE	825	850	540	740	275	340	175	235	115	170	0	55	0	0	0	0	0	0	0	0
FIREBAR	0	0	20	25	35	50	100	125	200	300	300	400	400	500	400	500	400	500	400	500
Lt Bmbr Recon Rgts**	32	40	21	27	12	16	7	11	4	8	0	2	0	0	0	0	0	0	0	0
BEAGLE	625	650	410	430	225	260	125	175	85	130	0	45	0	0	0	0	0	0	0	0
Division Avia. Sections***																				
Lt. Helicopters 2/	420	730	500	800	490	870	550	950	630	950	710	1,000	650	1,000	510	1,000	350	950	250	850
Med. Helicopters	80	120	85	120	70	120	60	110	50	100	40	90	30	90	20	85	10	75	0	75
Hevy. Helicopters	10	20	30	50	65	110	100	180	140	220	150	240	180	280	180	280	160	280	170	290
Corps and Army																				
Aviation Sections	120	130	130	140	130	140	120	130	120	130	110	130	100	130	100	130	100	130	100	130
Lt Helicopters 2/	440	800	480	900	540	960	490	960	440	960	400	960	350	910	300	900	200	800	65	720
Heavy Helicopters	0	0	0	0	0	0	0	0	0	15	0	15	15	35	20	65	40	80	55	110

* Footnotes on following page.

** We suggest a category entitled "Strike Recon" in which Firebar A more logically falls.

*** A table reflecting the numbers of helicopters serving the Tactical AirForces has not appeared in previous NIEs, therefore, all the following

1/ Tactical Aviation transport units are included in Table III B1a.

2/ See Section III B3 for indication of models included in light aircraft categories.

SOVIET GENERAL PURPOSE AVIATION -- NUMBERS OF EQUIPMENT PER UNITS

	Equipment Per Unit										
	Light Bombers	Fighters	Cruise Missiles	Trainers	Transports Med.	Transports Lt.	Transports Hvy.	Helicopters Hvy.	Helicopters Med.	Helicopters Lt.	Lt. FW Aircraft
Tactical Air Army 1/											
Fighter Corps 1/											
Division	64-96	74-175	0	0	0	0	0	0	0	0	0
Fighter Regiment	0	37	0	0	0	0	0	0	0	0	0
Recon. Regiment	0	32	0	0	0	0	0	0	0	0	0
Light Bomber Division 1/	64-96	0	0	0	0	0	0	0	0	0	0
Bomber Regiment	32	0	0	0	0	0	0	0	0	0	0
Recon. Regiment	32	0	0	0	0	0	0	0	0	0	0
Transport Division 1/											
Transport Regiment	0	0	0	0	32-36	40-45	18-24	0	0	0	0
Helicopter Regiment	0	0	0	0	0	0	0	30	30	36	0
Div. Av. Sec.	0	0	0	0	0	0	0	0	0	0	0
Corps/Army Av. Sec.	0	0	0	0	0	0	0	3	3	3	2-5

1/ Equipment listed for this unit are exclusive of those in subordinate echelons.

III B1a

SOVIET GENERAL PURPOSE AVIATION -- NUMBERS OF AIRLIFT UNITS AND AIRCRAFT BY YEAR
(MILITARY TRANSPORT AVIATION)*

Units	Mid-1961		Mid-1962		Mid-1963		Mid-1964		Mid-1965		Mid-1966		Mid-1967		Mid-1968		Mid-1969		Mid-1970	
	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi
Airborne Aviation Divisions	5	6	5	6	4	6	4	5	3	4	3	4	3	4	3	4	3	4	3	4
Airborne Aviation Regiments**	19	24	19	24	18	23	16	21	13	18	13	18	13	18	13	18	13	18	13	18
Tactical Aviation Division Regiments (Fixed Wing)**	6	8	6	8	6	8	4	5	3	4	3	4	3	4	3	4	3	4	3	4
Regiments (Helicopter)	8	10	10	11	10	12	10	13	10	13	10	13	10	13	10	13	7	13	5	11
Naval Aviation Transport Regts.	2	3	2	3	2	3	1	2	1	2	1	2	1	2	1	2	1	2	1	2
Long Range Aviation Transport Regts.	6	8	6	8	6	8	5	7	4	6	4	6	4	6	4	6	4	6	4	6
Air Defense Transport Aviation Regts.	2	3	2	3	2	3	1	2	1	2	1	2	1	2	1	2	1	2	1	2
Special Mission Units	6	8	6	8	6	8	5	8	6	8	6	8	6	8	6	8	6	8	6	8
Aircraft [1/]																				
Very Light (Colt, Clod, Creek)***	1650	2000	1700	2100	1650	2050	1500	1900	1400	1800	1300	1700	1200	1625	1075	1550	850	1450	600	1300
Light Transports	1125	1500	1000	1350	825	1150	500	850	250	500	200	300	75	175	25	75	25	50	25	50
Medium Transports	400	475	500	575	600	700	700	800	675	825	650	800	600	775	550	725	500	650	475	600
Heavy Transports	2	3	2	3	2	3	2	3	2	15	5	50	25	100	75	200	125	300	225	425
Supersonic Transport																			0	2
Light Helicopters	1000	1800	1200	2000	1200	2200	1300	2300	1300	2300	1400	2500	1300	2500	1100	2500	840	2300	620	2200
Medium Helicopters	80	120	85	120	70	120	60	110	50	100	40	90	30	90	20	85	10	75	0	75
Heavy Helicopters	10	20	30	50	67	120	100	190	150	240	170	280	210	340	240	360	210	400	240	420

* Figures have been rounded. A table reflecting Military Transport Aviation has not been included in previous NIEs, therefore, all figures in this table should be bracketed.

** Independent Squadrons are included in this estimate on the basis of 10 aircraft per Squadron and 3 - 4 Squadrons per Regiment. As a result, the total number of regiments is higher than the number of regiments normally reflected in estimates of Air Order of Battle.

*** No attempt has been made to assign the very light aircraft to units. Included in the total of very light aircraft are those DOSAAF. These serve as communications/utility, liaison and short range general purpose aircraft.

1/ See Section III B3 for indication of aircraft models included in light, medium, and heavy categories.

III C1b

SOVIET GENERAL PURPOSE NAVAL FORCES, AIR AND COASTAL DEFENSE ELEMENTS -- TOTAL STRENGTHS BY TYPE BY YEAR

Units and Equipment	Mid-1961	Mid-1962	Mid-1963	Mid-1964	Mid-1965	Mid-1966	Mid-1967	Mid-1968	Mid-1969	Mid-1970
Naval Air Forces										
Naval Air Regiments										
BADGER	35-50	50-75	75-95	75-95	80-115	90-135	95-145	95-145	95-145	95-145
BADGER with AS-1	95-125	75-100	50-95	45-75	0- 65	0- 30	-	-	-	-
BADGER with AS-2	175-215	175-215	175-215	175-215	115-200	50- 75	0-145	0-145	0-145	0-145
BLINDER	-	-	10-20	25-50	30-65	40- 85	50-100	50-100	50-100	50-100
BLINDER with AS-4	-	-	-	0-25	10-50	20- 75	25-100	25-100	25-100	25-100
Other Air Elements										
Light Bomber Units										
BEAGLE	25-50	50-75	75-125	110-125	110-125	95-100	95-100	80-110	80-110	80-110
Patrol Units										
MADGE	80-100	75-85	70- 80	65- 75	60- 70	55- 65	50- 60	40- 50	30- 40	20- 30
MALLOW	4- 25	4-25	4- 25	4- 25	0- 20	0- 20	0- 15	0- 15	0- 10	0-10
MAIL	0	0	0	0- 15	15- 50	40- 80	55-100	65-115	65-115	60-110
Helicopter Units*										
Heavy Helicopters 1/			2- 5	2- 10	5- 15	10- 20	10- 20	5- 20	5- 20	5- 20
Light Helicopters 1/	130-175	160-180	150-200	160-200	180-240	190-280	210-320	220-360	220-400	240-420

1. See Section IIIB3 for indication of aircraft models included in light and medium categories.

* A table reflecting the numbers of helicopters serving the Naval Air Forces has not appeared in previous NIEs, therefore, all the following figures in this table should be bracketed.

III C2b

SOVIET GENERAL PURPOSE NAVAL FORCES, AIR AND COASTAL DEFENSE ELEMENTS -- DEPLOYMENT BY TYPE BY YEAR

Total Numbers of Units and Equipment	Northern Fleet			Baltic Fleet			Black Sea Fleet			Pacific Fleet		
	Mid-1964	Mid-1967	Mid-1970	Mid-1964	Mid-1967	Mid-1970	Mid-1964	Mid-1967	Mid-1970	Mid-1964	Mid-1967	Mid-1970
Naval Air Forces												
Naval Air Regiments												
BADGER	20-25	25-40	25-40	15-20	20-30	20-30	15-20	20-30	20-30	25-30	30-45	30-45
BADGER with AS-1	10-15	-	-	15-20	-	-	10-20	-	-	10-20	-	-
BADGER with AS-2	55-65	0-45	0-45	20-30	0-15	0-15	40-50	0-35	0-35	60-70	0-50	0-50
BLINDER	5-10	15-30	15-30	10-20	10-20	10-20	5-10	10-20	10-20	5-10	15-30	15-30
BLINDER with AS-4	0-10	10-30	10-30	0- 5	0-15	0-15	0- 5	0-20	0-20	0-10	15-35	15-35
Other Air Elements												
Light Bomber Units												
BEAGLE	-	-	-	30-35	25-30	20-30	40-45	35-40	30-40	40-45	35-40	30-40
Patrol Units												
MADGE	15-20	10-15	5-10	8-10	6- 8	0- 0	12-15	9-12	0- 0	26-30	21-25	15-20
MALLOW	0- 0	0- 0	0- 0	0- 0	0- 0	0- 0	4-25	0-15	0-10	0- 0	0- 0	0- 0
MAIL	0- 0	15-25	15-25	0-10	10-20	15-25	0-15	10-20	10-25	0- 0	20-30	20-30
Helicopter Units *												
Heavy Helicopters 1/	2- 7	5-10	5-10	0- 1	1- 3	0- 3	0- 1	1- 2	0- 2	0- 1	3- 5	0- 5
Light Helicopters 1/	50-60	65-100	74-130	41-50	53-80	60-110	12-15	15-23	17-30	57-75	74-110	84-150

1/ See Section IIIB3 for indication of aircraft models included in light and medium categories.

* A table reflecting the numbers of helicopters serving the Naval Air Forces has not appeared in previous NIEs, therefore, all the following figures in this table should be bracketed.

Section III B Soviet General Purpose Aviation

SOVIET GENERAL PURPOSE AVIATION -- NUMBERS OF COMBAT UNITS AND AIRCRAFT BY MODEL BY YEAR 1/*

Alternative A: Lowside of Force, Table 7, Annex A, NIE 11-14-62
Alternative B: Highside of Force, Table 7, Annex A, NIE 11-14-62

	Mid-1961		Mid-1962		Mid-1963		Mid-1964		Mid-1965		Mid-1966		Mid-1967		Mid-1968		Mid-1969		Mid-1970	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Tactical Air Armies	12	14	12	14	12	14	12	14	12	14	10	14	10	14	8	14	8	14	8	14
Fighter Corps	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Fighter Divisions																				
Fighter Regiments	74	80	68	75	65	75	60	72	50	66	40	66	39	64	36	61	30	56	24	54
FAGOT	265	305	215	260	120	165	40	80	0	0	0	0	0	0	0	0	0	0	0	0
FRESCO	1,800	1,900	1,500	1,600	1,250	1,350	900	1,000	500	650	200	500	100	300	0	50	0	0	0	0
FARMER	400	450	350	400	325	375	250	300	200	250	75	200	25	125	0	100	0	0	0	0
FISHBED	150	175	275	325	425	525	540	700	650	900	700	1,000	750	1,100	750	1,100	600	950	450	850
FITTER	50	75	125	150	275	300	325	500	450	600	525	725	550	750	550	750	500	700	400	600
TF-1967	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	200	0	400	0	500
Fighter Recon Rgts	5	9	7	11	8	12	7	11	6	10	5	8	3	6	2	4	0	3	0	2
FAGOT	35	45	35	40	30	35	10	20	0	0	0	0	0	0	0	0	0	0	0	0
FLASHLIGHT	50	75	75	100	100	125	100	125	100	125	75	100	50	75	25	50	10	40	0	35
Light Bomber Division																				
Lt Bomber Rgts**	27	32	18	29	10	15	9	14	10	18	10	18	13	19	13	19	13	19	13	19
BEAGLE	825	850	540	740	275	340	175	235	115	170	0	55	0	0	0	0	0	0	0	0
FIREBAR	0	0	20	25	35	50	100	125	200	300	300	400	400	500	400	500	400	500	400	500
Lt Bmbr Recon Rgts**	32	40	21	27	12	16	7	11	4	8	0	2	0	0	0	0	0	0	0	0
BEAGLE	625	650	410	430	225	260	125	175	85	130	0	45	0	0	0	0	0	0	0	0
Division Avia. Sections***																				
Lt. Helicopters 2/	420	730	500	800	490	870	550	950	630	950	710	1,000	650	1,000	510	1,000	350	950	250	850
Med. Helicopters	80	120	85	120	70	120	60	110	50	100	40	90	30	90	20	85	10	75	0	75
Hevy. Helicopters	10	20	30	50	65	110	100	180	140	220	150	240	180	280	180	280	160	280	170	290
Corps and Army																				
Aviation Sections	120	130	130	140	130	140	120	130	120	130	110	130	100	130	100	130	100	130	100	130
Lt Helicopters 2/	440	800	480	900	540	960	490	960	440	960	400	960	350	910	300	900	200	800	65	720
Heavy Helicopters	0	0	0	0	0	0	0	0	0	15	0	15	15	35	20	65	40	80	55	110

* Footnotes on following page.

** We suggest a category entitled "Strike Recon" in which Firebar A more logically falls.

*** A table reflecting the numbers of helicopters serving the Tactical AirForces has not appeared in previous NIEs, therefore, all the following figures in this table should be bracketed.

1/ Tactical Aviation transport units are included in Table III B1a.

2/ See Section III B3 for indication of models included in light aircraft categor

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III B2

SOVIET GENERAL PURPOSE AVIATION -- NUMBERS OF EQUIPMENT PER UNITS

	Equipment Per Unit										
					Transports			Helicopters			
	Light Bombers	Fighters	Cruise Missiles	Trainers	Med.	Lt.	Hvy.	Hvy.	Med.	Lt.	Lt. FW Aircraft
Tactical Air Army 1/											
Fighter Corps 1/											
Division	64-96	74-175	0	0	0	0	0	0	0	0	0
Fighter Regiment	0	37	0	0	0	0	0	0	0	0	0
Recon. Regiment	0	32	0	0	0	0	0	0	0	0	0
Light Bomber Division 1/	64-96	0	0	0	0	0	0	0	0	0	0
Bomber Regiment	32	0	0	0	0	0	0	0	0	0	0
Recon. Regiment	32	0	0	0	0	0	0	0	0	0	0
Transport Division 1/											
Transport Regiment	0	0	0	0	32-36	40-45	18-24	0	0	0	0
Helicopter Regiment	0	0	0	0	0	0	0	30	30	36	0
Div. Av. Sec.	0	0	0	0	0	0	0	0	0	0	0
Corps/Army Av. Sec.	0	0	0	0	0	0	0	3	3	3	2-5

1/ Equipment listed for this unit are exclusive of those in subordinate echelons.

III B1a

SOVIET GENERAL PURPOSE AVIATION -- NUMBERS OF AIRLIFT UNITS AND AIRCRAFT BY YEAR
(MILITARY TRANSPORT AVIATION)*

Units	Mid-1961		Mid-1962		Mid-1963		Mid-1964		Mid-1965		Mid-1966		Mid-1967		Mid-1968		Mid-1969		Mid-1970	
	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi	Lo	Hi
Airborne Aviation Divisions	5	6	5	6	4	6	4	5	3	4	3	4	3	4	3	4	3	4	3	4
Airborne Aviation Regiments**	19	24	19	24	18	23	16	21	13	18	13	18	13	18	13	18	13	18	13	18
Tactical Aviation Division Regiments (Fixed Wing)**	6	8	6	8	6	8	4	5	3	4	3	4	3	4	3	4	3	4	3	4
Regiments (Helicopter)	8	10	10	11	10	12	10	13	10	13	10	13	10	13	10	13	7	13	5	11
Naval Aviation Transport Regts.	2	3	2	3	2	3	1	2	1	2	1	2	1	2	1	2	1	2	1	2
Long Range Aviation Transport Regts.	6	8	6	8	6	8	5	7	4	6	4	6	4	6	4	6	4	6	4	6
Air Defense Transport Aviation Regts.	2	3	2	3	2	3	1	2	1	2	1	2	1	2	1	2	1	2	1	2
Special Mission Units	6	8	6	8	6	8	5	8	6	8	6	8	6	8	6	8	6	8	6	8
Aircraft 1/																				
Very Light (Colt, Clod, Creek)***	1650	2000	1700	2100	1650	2050	1500	1900	1400	1800	1300	1700	1200	1625	1075	1550	850	1450	600	1300
Light Transports	1125	1500	1000	1350	825	1150	500	850	250	500	200	300	75	175	25	75	25	50	25	50
Medium Transports	400	475	500	575	600	700	700	800	675	825	650	800	600	775	550	725	500	650	475	600
Heavy Transports	2	3	2	3	2	3	2	3	2	15	5	50	25	100	75	200	125	300	225	425
Supersonic Transport																			0	2
Light Helicopters	1000	1800	1200	2000	1200	2200	1300	2300	1300	2300	1400	2500	1300	2500	1100	2500	840	2300	620	2200
Medium Helicopters	80	120	85	120	70	120	60	110	50	100	40	90	30	90	20	85	10	75	0	75
Heavy Helicopters	10	20	30	50	67	120	100	190	150	240	170	280	210	340	240	360	210	400	240	420

* Figures have been rounded. A table reflecting Military Transport Aviation has not been included in previous NIEs, therefore, all figures in this table should be bracketed.

** Independent Squadrons are included in this estimate on the basis of 10 aircraft per Squadron and 3 - 4 Squadrons per Regiment. As a result, the total number of regiments is higher than the number of regiments normally reflected in estimates of Air Order of Battle.

*** No attempt has been made to assign the very light aircraft to units. Included in the total of very light aircraft are those DOSAAF. These serve as communications/utility, liaison and short range general purpose aircraft.

1/ See Section III B3 for indication of aircraft models included in light, medium, and heavy categories.

Section III C

Soviet General Purpose Naval Forces

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III Cla

SOVIET GENERAL PURPOSE NAVAL FORCES, SHIPS -- TOTAL STRENGTHS BY TYPE BY YEAR
(EXCLUDING BALLISTIC MISSILE SUBMARINES) 1/

	Mid-1961	Mid-1962	Mid-1963	Mid-1964	Mid-1965	Mid-1966	Mid-1967	Mid-1968	Mid-1969	Mid-1970
Fleets	4	4	4	4	4	4	4	4	4	4
Submarines Forces										
Divisions	6	6	6	6	6	6	6	6	5	5
Brigades	25	28	29	31	32	33	34	34	30	26
Nuclear-Propelled Submarines	5-7	10-12	16-18	22-24	27-32	32-39	37-46	42-53	47-60	52-67
Cruise Missile E Mod. 1	2	4	5	6	6-7	6-7	6-7	6-7	6-7	6-7
E Mod. 2			1	2	4-5	6-8	8-11	10-14	12-17	14-20
Torpedo Attack										
N	3-5	6-8	10-12	14-16	17-20	20-24	23-28	26-32	29-36	32-40
Diesel-Propelled, First Line	339	330	320	287-288	293-298	300-308	307-319	301-315	237-253	161-179
Cruise Missile	4	10	11	13-15	16-19	20-24	24-30	24-30	24-30	24-30
Old Model W-Conv.	4	10	10	12	12	12	12	12	12	12
Current Model J				1-2	4-7	8-12	12-18	12-18	12-18	12-18
Long Range Torpedo - Z, F, F/O	37	40	47	50	53-55	56-60	59-65	60-68	57-67	54-66
Long Range Torpedo - W, R	220	204	194	194	194	194	194	190	139	78
Medium Range Torpedo - Q	30	30	30	30	30	30	30	27	17	5
Short Range Torpedo - M	48	46	38							
Support Ships (Sub-Tenders)	32	31	30	30	30	30	30	30	30	30
Second Line Subs	43	8	8	46	46	46	46	50	100	169
Surface Forces										
Divisions	12	13	14	14	14	14	14	14	14	14
Brigades	50	50	49	49	49	49	49	49	49	49
Cruisers First Line	23	17	16	16	16	16	16	16	16	13
Missile Destroyers First Line	11	14	16	20	22-24	24-28	26-32	28-36	30-40	32-44
Other Destroyers First Line	98	90	85	83	82	82	82	82	82	76
Destroyer Escorts First Line	66	66	62	58	56	56	56	56	56	52
Guided Missile Escort Ships	0	1	2	2-3	4-5	5-7	6-9	7-11	8-12	8-12
Guided Missile Motorboats	66	113	128	130	130	130	130	130	130	130
Other Patrol Craft	700-750	700-750	700-750	700-750	700-750	700-750	700-750	700-750	700-750	700-750
Support Ships (Auxiliaries)	530-580	600-650	650-700	690-740	700-750	700-750	700-750	700-750	700-750	700-750
Mine Craft (Sweepers only)	400-450	400-450	400-450	400-450	400-450	400-450	400-450	400-450	400-450	400-450
Second Line Ships (Combatant)	19	7	6	5	1					13
Amphibious Forces										
Landing Ships - LSC, LSM, LSI	80-90	80-90	80-90	80-90	80-90	80-90	80-90	80-90	80-90	80-90
Landing Craft - LCM, LCU	450-480	450-480	450-480	450-480	450-480	450-480	450-480	450-480	450-480	450-480

Table III Cla (Cont'd)

1/ Total strengths through mid-1963 represent the best estimate based on available intelligence. Strengths through mid-1970 have been adjusted to show either production or attrition because of age. Strengths that remain constant throughout the period represent an estimated continuing force level -- production offsetting attrition. Attrition because of age is adjusted as follows:

Submarines: First line submarines are those of modern construction. The second line category lists units from 14 to 20 years old which, by virtue of age and design are considered useful only for training or perhaps coastal defense. Some of the second line ships will probably be retired from service earlier than on an age criterion.

Surface Ships: Surface ships which are at least 20 years old are carried in a second line status until there is evidence of their removal from the fleet or until they are finally considered removed (in the absence of contrary evidence) when 25 years old.

No adjustment to strengths because of loss by accidents or transfers (not contracted for by end of 1963) have been estimated.

III C1b

SOVIET GENERAL PURPOSE NAVAL FORCES, AIR AND COASTAL DEFENSE ELEMENTS -- TOTAL STRENGTHS BY TYPE BY YEAR

Units and Equipment	Mid-1961	Mid-1962	Mid-1963	Mid-1964	Mid-1965	Mid-1966	Mid-1967	Mid-1968	Mid-1969	Mid-1970
Naval Air Forces										
Naval Air Regiments										
BADGER	35-50	50-75	75-95	75-95	80-115	90-135	95-145	95-145	95-145	95-145
BADGER with AS-1	95-125	75-100	50-95	45-75	0- 65	0- 30	-	-	-	-
BADGER with AS-2	175-215	175-215	175-215	175-215	115-200	50- 75	0-145	0-145	0-145	0-145
BLINDER	-	-	10-20	25-50	30-65	40- 85	50-100	50-100	50-100	50-100
BLINDER with AS-4	-	-	-	0-25	10-50	20- 75	25-100	25-100	25-100	25-100
Other Air Elements										
Light Bomber Units										
BEAGLE	25-50	50-75	75-125	110-125	110-125	95-100	95-100	80-110	80-110	80-110
Patrol Units										
MADGE	80-100	75-85	70- 80	65- 75	60- 70	55- 65	50- 60	40- 50	30- 40	20- 30
MALLOW	4- 25	4-25	4- 25	4- 25	0- 20	0- 20	0- 15	0- 15	0- 10	0-10
MAIL	0	0	0	0- 15	15- 50	40- 80	55-100	65-115	65-115	60-110
Helicopter Units*										
Heavy Helicopters 1/			2- 5	2- 10	5- 15	10- 20	10- 20	5- 20	5- 20	5- 20
Light Helicopters 1/	130-175	160-180	150-200	160-200	180-240	190-280	210-320	220-360	220-400	240-420

1. See Section IIIB3 for indication of aircraft models included in light and medium categories.

* A table reflecting the numbers of helicopters serving the Naval Air Forces has not appeared in previous NIEs, therefore, all the following figures in this table should be bracketed.

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III C1b

SOVIET GENERAL PURPOSE NAVAL FORCES, AIR, AND COASTAL DEFENSE ELEMENTS
TOTAL STRENGTHS BY TYPE BY YEAR

	Mid-1961	Mid-1962	Mid-1963	Mid-1964	Mid-1965	Mid-1966	Mid-1967	Mid-1968	Mid-1969	Mid-1970
Coastal Defense Forces										
Battalions										
Missile Sites	24-34	24-34	23-32	20-28	17-22	17-20	17-19	17-20	17-21	17-21
Launchers	48-68	48-68	46-64	40-56	34-44	34-40	34-38	34-40	34-42	34-42

III C1c

SOVIET GENERAL PURPOSE NAVAL FORCES -- MISSILE INVENTORIES
(Excluding Ballistic Missiles)

A: Missiles aboard ship, in unit, or with aircraft.
B: Missiles in reserve.

Type	Mid-1961 1/		Mid-1962		Mid-1963		Mid-1964		Mid-1965		Mid-1966		Mid-1967		Mid-1968		Mid-1969		Mid-1970	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Air-To-Surface Missiles																				
AS-1	430 550	220 280	330 430	170 220	220 430	110 220	220 330	110 170	0 280	0 150	0 130	0 70	0	0	0	0	0	0	0	0
AS-2	340 440	180 230	340 440	180 230	340 440	180 230	340 440	180 230	230 400	120 200	100 340	50 180	0 300	0 150	0 300	0 150	0 300	0 150	0 300	0 150
AS-4	0 0	0 0	0 0	0 0	0 0	0 0	0 65	0 35	30 130	10 70	50 200	30 100	65 300	35 100	65 300	35 100	65 300	35 100	65 300	35 100

1/ All air to surface missiles may be with the aircraft.

Soviet General Purpose Naval Forces - Missile Inventories
(Excluding Ballistic Missiles)

A. Missiles Aboard Ship or in Unit
B. Missiles in Reserve

Type	Mid-1961		Mid-1962		Mid-1963		Mid-1964		Mid-1965		Mid-1966		Mid-1967		Mid-1968		Mid-1969		Mid-1970	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
Surface Ship Missiles 1/																				
SS-N-1	162	121	180	135	180	135	180	135	180	135	180	135	180	135	180	135	180	135	180	135
SS-N-2	188	141	326	294	388	291	412	309	412	309	412	309	412	309	412	309	412	309	412	309
SS-N-[illegible]			16	12	32	24	64	48	64	48	64	48	64	48	64	48	64	48	64	48
SA-N-1			215	150	380	265														
(High)							660	450	910	620	1,135	765	1,360	910	1,585	1,060	1,810	1,205	2,010	1,335
(Low)							685	470	1,135	765	1,585	1,060	2,035	1,350	2,485	1,650	2,910	1,920	3,310	2,180
[SA-N-Follow-on]											[40	30]	[80	60]	[120	90]	[160	120]	[200	150]
Submarine Missiles 2/																				
SS-N-3 Type	18	5	50	12	68	17														
(High)							94	23	144	35	188	46	236	58	260	64	284	70	308	76
(Low)							90	22	118	29	150	37	182	45	198	49	214	53	230	57
Coastal Defense Missiles 3/																				
SS-CD-1																				
(High)	68	204	68	204	62	186	42	126	24	72	10	30								
(Low)	48	144	48	144	46	138	32	96	20	60	8	24								
SS-N-3 Type																				
(High)					2	6	14	42	20	60	30	90	38	114	40	120	42	126	42	126
(Low)					2	6	8	24	14	42	26	78	34	102	34	102	34	102	34	102

Footnotes(to Table III Cla)

1/ Number of missiles in column A equals one ship fill for each guided missile surface ship listed in Table III Cla. Number in column B equals 75 percent of column A.

2/ Number of missiles in column A equals one submarine fill for each cruise missile submarine listed in Table III Cla. Number in dolumn B equals 25 percent of column A.

3/ Number of missiles in column A equals two missiles per site. (Each site is equipped with two launchers.) Number in column B equals six missiles per site.

	Northern Fleet			Baltic Fleet			Black Sea Fleet			Pacific Fleet		
	Mid-1964	Mid-1967	Mid-1970	Mid-1964	Mid-1967	Mid-1970	Mid-1964	Mid-1967	Mid-1970	Mid-1964	Mid-1967	Mid-1970
Surface Forces												
Divisions	4	4	4	2	2	2	4	4	4	4	4	4
Brigades	6	6	6	17	17	17	7	7	7	19	19	19
Cruisers First Line	3	3	3	4	4	3	5	5	3	4	4	4
Missile Destroyers First Line	5	8-10	12-16	4	5-6	6-8	7	6-8	5-8	4	7-9	9-14
Other Destroyers First Line	25	25	24	18	18	16	15	15	14	25	24	23
Destroyer Escorts First Line	20	20	16	11-13	11	11	10	10	10	17	15	15
Guided Missile Escort Ships	0	1-2	3-4	0	1-2	2-3	2-3	3	1-2	0	1-3	3-4
Guided Missile Motor boats	15	15	15	35	35	35	30	30	30	50	50	50
Other Patrol Craft	90-100	90-100	90-100	230-250	230-250	230-250	190-200	190-200	190-200	190-200	190-200	190-200
Mine Craft (Minesweepers)	85-100	85-100	85-100	185-200	185-200	185-200	85-95	85-95	85-95	45-55	45-55	45-55
Support Ships (Auxiliaries)	140-150	150-160	150-160	230-250	230-250	230-250	100-110	100-110	100-110	220-230	220-230	220-230
Second Line Ships (Combatant)	0	0	5	1	0	3	2	0	2	2	0	3
Amphibious Forces												
Landing Ships (LSC/LSM/LSI)	10	10	10	45950	45-50	45-50	10	10	10	15-20	15-20	15-20
Landing Craft (LCM/LCU)	100-105	100-105	100-105	110-120	110-120	110-120	140-150	140-150	140-150	100-105	100-105	100-105

III C2b

SOVIET GENERAL PURPOSE NAVAL FORCES, AIR AND COASTAL DEFENSE ELEMENTS -- DEPLOYMENT BY TYPE BY YEAR

Total Numbers of Units and Equipment	Northern Fleet			Baltic Fleet			Black Sea Fleet			Pacific Fleet		
	Mid-1964	Mid-1967	Mid-1970	Mid-1964	Mid-1967	Mid-1970	Mid-1964	Mid-1967	Mid-1970	Mid-1964	Mid-1967	Mid-1970
Naval Air Forces												
Naval Air Regiments												
BADGER	20-25	25-40	25-40	15-20	20-30	20-30	15-20	20-30	20-30	25-30	30-45	30-45
BADGER with AS-1	10-15	-	-	15-20	-	-	10-20	-	-	10-20	-	-
BADGER with AS-2	55-65	0-45	0-45	20-30	0-15	0-15	40-50	0-35	0-35	60-70	0-50	0-50
BLINDER	5-10	15-30	15-30	10-20	10-20	10-20	5-10	10-20	10-20	5-10	15-30	15-30
BLINDER with AS-4	0-10	10-30	10-30	0- 5	0-15	0-15	0- 5	0-20	0-20	0-10	15-35	15-35
Other Air Elements												
Light Bomber Units												
BEAGLE	-	-	-	30-35	25-30	20-30	40-45	35-40	30-40	40-45	35-40	30-40
Patrol Units												
MADGE	15-20	10-15	5-10	8-10	6- 8	0- 0	12-15	9-12	0- 0	26-30	21-25	15-20
MALLOW	0- 0	0- 0	0- 0	0- 0	0- 0	0- 0	4-25	0-15	0-10	0- 0	0- 0	0- 0
MAIL	0- 0	15-25	15-25	0- 0	10-20	15-25	0-15	10-20	10-25	0- 0	20-30	20-30
Helicopter Units *												
Heavy Helicopters 1/	2- 7	5-10	5-10	0- 1	1- 3	0- 3	0- 1	1- 2	0- 2	0- 1	3- 5	0- 5
Light Helicopters 1/	50-60	65-100	74-130	41-50	53-80	60-110	12-15	15-23	17-30	57-75	74-110	84-150

1/ See Section IIIB3 for indication of aircraft models included in light and medium categories.

* A table reflecting the numbers of helicopters serving the Naval Air Forces has not appeared in previous NIEs, therefore, all the following figures in this table should be bracketed.

Soviet General Purpose Naval Forces, Air and Coastal Defense Elements - Deployment by Type, by Year

Total Numbers of Unit and Equipment	Northern Fleet			Baltic Fleet			Black Sea Fleet			Pacific Fleet		
	Mid-1964	Mid-1967	Mid-1970	Mid-1964	Mid-1967	Mid-1970	Mid-1964	Mid-1967	Mid-1970	Mid-1964	Mid-1967	Mid-1970
Coastal Defense Forces												
(Battalions)	3-6	3-4	3-4	3-4	2-3	2-3	6-7	4-4	4-5	8-11	8-8	8-9
Missile Sites	3-6	3-4	3-4	3-4	2-3	2-3	6-7	4-4	4-5	8-11	8-8	8-9
Launchers	6-12	6-8	6-8	6-8	4-6	4-6	12-14	8-8	8-10	16-22	16-16	16-18

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Section VI Soviet Military Personnel Strength

PERSONNEL STRENGTH OF THE SOVIET MILITARY ESTABLISHMENT BY FORCE BY YEAR

	Mid-1961 Lo/Hi	Mid-1962 Lo/Hi	Mid-1963 Lo/Hi	Mid-1964 Lo/Hi	Mid-1965 Lo/Hi	Mid-1966 Lo/Hi	Mid-1967 Lo/Hi	Mid-1968 Lo/Hi	Mid-1969 Lo/Hi	Mid-1970 Lo/Hi
STRATEGIC ATTACK FORCES	74,525-	105,200-	145,821-	181,698-	189,747-	200,980-	205,020-	205,020-	205,020-	205,020-
Ground-launched Missiles	88,115	128,705	167,948	207,130	224,733	246,161	272,621	283,401	306,771	307,871
Ballistic Missile Subs										
Long-Range Aviation										
AIR AND MISSILE DEFENSE FORCES										
Anti-aircraft Missiles										
Anti-missile Missiles										
Anti-aircraft Artillery										
Fighter Aviation of Air Defense										
Control and Warning										
GENERAL PURPOSE FORCES										
Ground Forces										
Divisional Force										
Combat Support										
Service Support										
AAir Forces										
Tactical Aviation										
Military Transport Aviation										
Naval Forces										
Surface Forces (Fleet										
Sub Forces Afloat (excl. Ball.)										
Shore Support										
Coastal Defense										
Naval Aviation										

PERSONNEL STRENGTH OF THE SOVIET STRATEGIC ATTACK FORCES BY TYPE BY YEAR

	Mid-1961 Lo/Hi	Mid-1962 Lo/Hi	Mid-1963 Lo/Hi	Mid-1964 Lo/Hi	Mid-1965 Lo/Hi	Mid-1966 Lo/Hi	Mid-1967 Lo/Hi	Mid-1968 Lo/Hi	Mid-1969 Lo/Hi	Mid-1970 Lo/Hi
GROUND-LAUNCHED MISSILES										
Existing ICBM Types	2,200-2,700	16,025-21,190	32,975-40,310	60,750-73,140	66,050-82,720	72,625-96,590	79,925-108,000	79,925-108,000	79,925-108,000	79,925-108,000
Follow-on ICBM Types 1/	0	0	0	0	0	0-5,250	0-18,200	0-28,000	0-49,300	0-50,300
Existing MRBM/IRBM Types	65,550-77,405	79,612-95,815	99,490-112,370	104,430-115,160	106,448-121,583	106,448-121,583	106,448-121,583	106,448-121,583	106,448-121,583	106,448-121,583
Follow-on MRBM/IRBM Types 2/	0	0	0	0	0	0	0	0	0	0
Strategic Rock. Forces Sup.	6,775-8,010	9,563-11,700	13,256-15,268	16,518-18,830	17,249-20,430	17,907-22,738	18,647-24,838	18,647-25,818	18,647-27,888	18,647-27,988
Total Personnel	74,525-88,115	105,200-128,705	145,821-167,948	181,698-207,130	189,747-224,733	200,980-246,161	205,020-272,621	205,020-283,401	205,020-306,771	205,020-307,871

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1/ This includes the SS-9, SS-VL, and the SS-Small.

2/ Follow-on MRBM/IRBM types are assumed to be a replacement for existing types. We estimate no additional personnel would be required.

VI E

SOVIET MILITARY PERSONNEL PERFORMING COMMAND, GENERAL SUPPORT, AND R&D FUNCTIONS BY YEAR

	1961 Lo/Hi	1962 Lo/Hi	1963 Lo/Hi	1964 Lo/Hi	1965 Lo/Hi	1966 Lo/Hi	1967 Lo/Hi	1968 Lo/Hi	1969 Lo/Hi	1970 Lo/Hi
COMMAND AND GENERAL SUPPORT										
Ministry of Defense Staff										
Other Central Staffs 1/ 2/										
Training Establishment										
Strategic Offns GM Schs. (SRT)	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Strategic Def. GM Schls.										
Aviation Schools										
Ground Force GM Schools										
Other Ground Force Schools										
Naval GM Schools										
Other Naval Schools										
Centrally-contrld Sup Troops										
Supply										
Medical										
Signal										
Motor Transport										
Railroad Transport										
Others 3/										
Centrally-contrld Coast Troops										
Total Personnel in C&CS										
RESEARCH AND DEVELOPMENT 1/										

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1/ Includes military personnel in mobilization and induction staffs, and those engaged in activities in support of the reservist and retirement programs, civil defense, and paramilitary programs such as DOSAAF.

2/ Limited to pre-operational school staffs and trainees.

3/ Provide other categories as required.